Generic cla
Search.

AH #7

Point of Contact:
Thomas G. Larson, Ph.D
703-308-7309
CM1, Rm. 6 B 01

```
=> file caplus
FILE 'CAPLUS' ENTERED AT 15:32:52 ON 04 JUN 2002
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FILE COVERS 1907 - 4 Jun 2002  VOL 136 ISS 23
FILE LAST UPDATED: 2 Jun 2002  (20020602/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> D QUE L25
L17 (    191480)SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L18 (    143502)SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L19 (     36859)SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L20 (    327110)SEA FILE=CAPLUS ABB=ON  PLU=ON  L17 OR L18 OR L19
L21 (      2733)SEA FILE=CAPLUS ABB=ON  PLU=ON  L20 (L) PUR/RL
L22 (     13669)SEA FILE=CAPLUS ABB=ON  PLU=ON  ION EXCHANGERS+PFT/CT
L23 (        17)SEA FILE=CAPLUS ABB=ON  PLU=ON  L22 AND L21
L24 (      2708)SEA FILE=CAPLUS ABB=ON  PLU=ON  ANION EXCHANGE+PFT/CT
L25           1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L23 AND L24
```

PUR = Purification Role

```
=> D QUE L34
L26 (    191480)SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L27 (    143502)SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L28 (     36859)SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L29 (    327110)SEA FILE=CAPLUS ABB=ON  PLU=ON  L26 OR L27 OR L28
L30 (      2733)SEA FILE=CAPLUS ABB=ON  PLU=ON  L29 (L) PUR/RL
L31 (     13669)SEA FILE=CAPLUS ABB=ON  PLU=ON  ION EXCHANGERS+PFT/CT
L32 (        17)SEA FILE=CAPLUS ABB=ON  PLU=ON  L31 AND L30
L33 (      7156)SEA FILE=CAPLUS ABB=ON  PLU=ON  BUFFERS+PFT/CT
L34           5 SEA FILE=CAPLUS ABB=ON  PLU=ON  L32 AND L33


=> D QUE L43
L35 (    191480)SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L36 (    143502)SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L37 (     36859)SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L38 (    327110)SEA FILE=CAPLUS ABB=ON  PLU=ON  L35 OR L36 OR L37
L39 (      2733)SEA FILE=CAPLUS ABB=ON  PLU=ON  L38 (L) PUR/RL
L40 (      7156)SEA FILE=CAPLUS ABB=ON  PLU=ON  BUFFERS+PFT/CT
L41 (     14391)SEA FILE=CAPLUS ABB=ON  PLU=ON  IMMOBILIZATION, BIOCHEMICAL+PFT
```

```
                /CT
L42 (          49) SEA FILE=CAPLUS ABB=ON  PLU=ON  L39 AND L41
L43             4  SEA FILE=CAPLUS ABB=ON  PLU=ON  L42 AND L40


=> D QUE L53
L44 (      191480) SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L45 (      143502) SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L46 (       36859) SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L47 (      327110) SEA FILE=CAPLUS ABB=ON  PLU=ON  L44 OR L45 OR L46
L48 (        2733) SEA FILE=CAPLUS ABB=ON  PLU=ON  L47 (L) PUR/RL
L49 (       88418) SEA FILE=CAPLUS ABB=ON  PLU=ON  AMINES+PFT/CT
L50 (       14391) SEA FILE=CAPLUS ABB=ON  PLU=ON  IMMOBILIZATION, BIOCHEMICAL+PFT
                /CT
L51 (          49) SEA FILE=CAPLUS ABB=ON  PLU=ON  L48 AND L50
L52 (           3) SEA FILE=CAPLUS ABB=ON  PLU=ON  L51 AND L49
L53             2  SEA FILE=CAPLUS ABB=ON  PLU=ON  L52 NOT LIGATION/TI


=> D QUE L64
L54 (      191480) SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L55 (      143502) SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L56 (       36859) SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L57 (      327110) SEA FILE=CAPLUS ABB=ON  PLU=ON  L54 OR L55 OR L56
L58 (        8380) SEA FILE=CAPLUS ABB=ON  PLU=ON  L57 (L) PREP/RL
L59 (       13669) SEA FILE=CAPLUS ABB=ON  PLU=ON  ION EXCHANGERS+PFT/CT
L60 (          18) SEA FILE=CAPLUS ABB=ON  PLU=ON  L58 AND L59
L61 (       26476) SEA FILE=CAPLUS ABB=ON  PLU=ON  71-00-1#/RN OR 26062-48-6#/RN
                OR 26854-81-9#/RN
L62 (       28162) SEA FILE=CAPLUS ABB=ON  PLU=ON  (HISTIDINE OR POLYHISTIDINE OR
                POLY (2W) HISTIDINE OR OLIGO (2W) HISTIDINE OR OLIGOHISTIDINE)/
                OBI
L63 (       34815) SEA FILE=CAPLUS ABB=ON  PLU=ON  L61 OR L62
L64             5  SEA FILE=CAPLUS ABB=ON  PLU=ON  L60 AND L63


=> D QUE L75
L65 (      191480) SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L66 (      143502) SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L67 (       36859) SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L68 (      327110) SEA FILE=CAPLUS ABB=ON  PLU=ON  L65 OR L66 OR L67
L69 (        2733) SEA FILE=CAPLUS ABB=ON  PLU=ON  L68 (L) PUR/RL
L70 (       14391) SEA FILE=CAPLUS ABB=ON  PLU=ON  IMMOBILIZATION, BIOCHEMICAL+PFT
                /CT
L71 (          49) SEA FILE=CAPLUS ABB=ON  PLU=ON  L69 AND L70
L72 (       26476) SEA FILE=CAPLUS ABB=ON  PLU=ON  71-00-1#/RN OR 26062-48-6#/RN
                OR 26854-81-9#/RN
L73 (       28162) SEA FILE=CAPLUS ABB=ON  PLU=ON  (HISTIDINE OR POLYHISTIDINE OR
                POLY (2W) HISTIDINE OR OLIGO (2W) HISTIDINE OR OLIGOHISTIDINE)/
                OBI
L74 (       34815) SEA FILE=CAPLUS ABB=ON  PLU=ON  L72 OR L73
L75             0  SEA FILE=CAPLUS ABB=ON  PLU=ON  L71 AND L74


=> D QUE L84
L76 (      191480) SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L77 (      143502) SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L78 (       36859) SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L79 (      327110) SEA FILE=CAPLUS ABB=ON  PLU=ON  L76 OR L77 OR L78
L80 (        8380) SEA FILE=CAPLUS ABB=ON  PLU=ON  L79 (L) PREP/RL
```

CA Reg # for histidine & poly HIS.

PREP ≡ preparation & purification role

```
L81 (     13669)SEA FILE=CAPLUS ABB=ON  PLU=ON  ION EXCHANGERS+PFT/CT
L82 (        18)SEA FILE=CAPLUS ABB=ON  PLU=ON  L80 AND L81
L83 (     11250)SEA FILE=CAPLUS ABB=ON  PLU=ON  "AMINES (L) POLYAMINES,
                NONPOLYMERIC"+PFT/CT
L84           0 SEA FILE=CAPLUS ABB=ON  PLU=ON  L82 AND L83


=> D QUE L93
L85 (    191480)SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L86 (    143502)SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L87 (     36859)SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L88 (    327110)SEA FILE=CAPLUS ABB=ON  PLU=ON  L85 OR L86 OR L87
L89 (      8380)SEA FILE=CAPLUS ABB=ON  PLU=ON  L88 (L) PREP/RL
L90 (     14391)SEA FILE=CAPLUS ABB=ON  PLU=ON  IMMOBILIZATION, BIOCHEMICAL+PFT
                /CT
L91 (       119)SEA FILE=CAPLUS ABB=ON  PLU=ON  L89 AND L90
L92 (     11250)SEA FILE=CAPLUS ABB=ON  PLU=ON  "AMINES (L) POLYAMINES,
                NONPOLYMERIC"+PFT/CT
L93           0 SEA FILE=CAPLUS ABB=ON  PLU=ON  L91 AND L92


=> D QUE L112
L105(    191600)SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L106(    143522)SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L107(     36874)SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L108(    327249)SEA FILE=CAPLUS ABB=ON  PLU=ON  (L105 OR L106 OR L107)
L109(      8389)SEA FILE=CAPLUS ABB=ON  PLU=ON  L108 (L) PREP/RL
L110(     88476)SEA FILE=CAPLUS ABB=ON  PLU=ON  AMINES+PFT/CT
L111(        62)SEA FILE=CAPLUS ABB=ON  PLU=ON  L110 (L) (POLYHYDROX? OR POLY
                (2W) HYDROXY?)
L112          1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L111 AND L109


=> S L25 OR L34 OR L43 OR L53 OR L64 OR L112
L375         13 L25 OR L34 OR L43 OR L53 OR L64 OR L112

=> FILE MEDLINE
FILE 'MEDLINE' ENTERED AT 15:36:42 ON 04 JUN 2002

 FILE LAST UPDATED: 2 JUN 2002 (20020602/UP). FILE COVERS 1958 TO DATE.

 On April 22, 2001, MEDLINE was reloaded. See HELP RLOAD for details.

 MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details.

 MEDLINE is now updated 4 times per week. A new current-awareness alert
 frequency (EVERYUPDATE) is available. See HELP UPDATE for more information.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

 The OLDMEDLINE file segment now contains data from 1958 through 1965.
 Enter HELP CONTENT for details.

 Left, right, and simultaneous left and right truncation are available in the
 Basic Index. See HELP SFIELDS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
 SUBSTANCE IDENTIFICATION.
```

```
=> D QUE L162
L154 (    504740) SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L155 (    431701) SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L156 (    285547) SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L157 (    649056) SEA FILE=MEDLINE ABB=ON  PLU=ON  L154 OR L155 OR L156
L158 (     39157) SEA FILE=MEDLINE ABB=ON  PLU=ON  L157 (L) IP/CT
L159 (     31681) SEA FILE=MEDLINE ABB=ON  PLU=ON  BUFFERS+NT,PFT/CT
L160 (       182) SEA FILE=MEDLINE ABB=ON  PLU=ON  L159 AND L158
L161 (      2361) SEA FILE=MEDLINE ABB=ON  PLU=ON  ION EXCHANGE+PFT/CT
L162            0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L161 AND L160

=> D QUE L172
L163 (    504740) SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L164 (    431701) SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L165 (    285547) SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L166 (    649056) SEA FILE=MEDLINE ABB=ON  PLU=ON  L163 OR L164 OR L165
L167 (     39157) SEA FILE=MEDLINE ABB=ON  PLU=ON  L166 (L) IP/CT
L168 (      9057) SEA FILE=MEDLINE ABB=ON  PLU=ON  L167/MAJ
L169 (     31681) SEA FILE=MEDLINE ABB=ON  PLU=ON  BUFFERS+NT,PFT/CT
L170 (       114) SEA FILE=MEDLINE ABB=ON  PLU=ON  L169 AND L168
L171 (     14227) SEA FILE=MEDLINE ABB=ON  PLU=ON  ADSORPTION+PFT/CT
L172            3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L170 AND L171

=> D QUE L181
L173 (    504740) SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L174 (    431701) SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L175 (    285547) SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L176 (    649056) SEA FILE=MEDLINE ABB=ON  PLU=ON  L173 OR L174 OR L175
L177 (     39157) SEA FILE=MEDLINE ABB=ON  PLU=ON  L176 (L) IP/CT
L178 (     31681) SEA FILE=MEDLINE ABB=ON  PLU=ON  BUFFERS+NT,PFT/CT
L179 (       182) SEA FILE=MEDLINE ABB=ON  PLU=ON  L178 AND L177
L180 (     18659) SEA FILE=MEDLINE ABB=ON  PLU=ON  ABSORPTION+PFT/CT
L181            1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L179 AND L180

=> D QUE L189
L182 (    504740) SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L183 (    431701) SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L184 (    285547) SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L185 (    649056) SEA FILE=MEDLINE ABB=ON  PLU=ON  L182 OR L183 OR L184
L186 (     39157) SEA FILE=MEDLINE ABB=ON  PLU=ON  L185 (L) IP/CT
L187 (      9057) SEA FILE=MEDLINE ABB=ON  PLU=ON  L186/MAJ
L188 (      2361) SEA FILE=MEDLINE ABB=ON  PLU=ON  ION EXCHANGE+PFT/CT
L189            1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L187 AND L188

=> D QUE L199
L190 (    504740) SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L191 (    431701) SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L192 (    285547) SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L193 (    649056) SEA FILE=MEDLINE ABB=ON  PLU=ON  L190 OR L191 OR L192
L194 (     39157) SEA FILE=MEDLINE ABB=ON  PLU=ON  L193 (L) IP/CT
L195 (     31681) SEA FILE=MEDLINE ABB=ON  PLU=ON  BUFFERS+NT,PFT/CT
L196 (       182) SEA FILE=MEDLINE ABB=ON  PLU=ON  L195 AND L194
L197 (     42578) SEA FILE=MEDLINE ABB=ON  PLU=ON  CHROMATOGRAPHY, ION EXCHANGE+N
                  T,PFT/CT
L198 (      3492) SEA FILE=MEDLINE ABB=ON  PLU=ON  L197 (L) MT/CT
```

IP ≡ isolation & purification

maj: major focus of document

MT ≡ methods

```
L199          2 SEA FILE=MEDLINE ABB=ON  PLU=ON  L196 AND L198


=> D QUE L207
L200(    504740)SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L201(    431701)SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L202(    285547)SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L203(    649056)SEA FILE=MEDLINE ABB=ON  PLU=ON  L200 OR L201 OR L202
L204(     39157)SEA FILE=MEDLINE ABB=ON  PLU=ON  L203 (L) IP/CT
L205(     12414)SEA FILE=MEDLINE ABB=ON  PLU=ON  HISTIDINE+PFT/CT
L206(       621)SEA FILE=MEDLINE ABB=ON  PLU=ON  L205 (L) AA/CT
L207          0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L204 AND L206


=> D QUE L215
L208(    504740)SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L209(    431701)SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L210(    285547)SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L211(    649056)SEA FILE=MEDLINE ABB=ON  PLU=ON  L208 OR L209 OR L210
L212(     39157)SEA FILE=MEDLINE ABB=ON  PLU=ON  L211 (L) IP/CT
L213(      9057)SEA FILE=MEDLINE ABB=ON  PLU=ON  L212/MAJ
L214(       458)SEA FILE=MEDLINE ABB=ON  PLU=ON  POLY HISTIDINE OR POLYHISTIDIN
                 E OR OLIGOHISTIDINE OR OLIGO HISTIDINE
L215          1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L213 AND L214


=> S L172 OR L181 OR L189 OR L199 OR L215
L376          8 L172 OR L181 OR L189 OR L199 OR L215

=> FILE BIOSIS WPIDS
FILE 'BIOSIS' ENTERED AT 15:46:43 ON 04 JUN 2002
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=> D QUE L273
L265(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                 NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L266(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L267(     51726)SEA ION EXCHANGE
L268(     67611)SEA L265 (5A) L266
L269(   1456171)SEA SOLID OR STATIONARY OR MATRIX OR MEDIUM OR MEDIA
L270(     29344)SEA HISTIDINE
L271(      2142)SEA L269 (S) L270
L272(        54)SEA L268 AND L271
L273          4 SEA L272 AND L267


=> D QUE L291
L283(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                 NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L284(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L285(     51726)SEA ION EXCHANGE
L286(     67611)SEA L283 (5A) L284
L287(   1456171)SEA SOLID OR STATIONARY OR MATRIX OR MEDIUM OR MEDIA
L288(       571)SEA POLY HISTIDINE OR POLYHISTIDINE OR
                 OLIGOHISTIDINE OR OLIGO HISTIDINE
L289(        73)SEA L287 (S) L288
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multiple free text search

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L290(        14)SEA L286 AND L289
L291          1 SEA L290 AND L285


=> D QUE L300
L292(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L293(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L294(     67611)SEA L292 (5A) L293
L295(   1456171)SEA SOLID OR STATIONARY OR MATRIX OR MEDIUM OR MEDIA
L296(    376601)SEA ADSORP? OR ABSORP? OR SORB? OR SORP?
L297(       571)SEA POLY HISTIDINE OR POLYHISTIDINE OR
                OLIGOHISTIDINE OR OLIGO HISTIDINE
L298(        73)SEA L295 (S) L297
L299(        14)SEA L294 AND L298
L300          1 SEA L299 AND L296


=> D QUE L305
L301(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L302(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L303(     67611)SEA L301 (5A) L302
L304(        46)SEA POLYHYDROXY? AMINE OR POLY HYDROXY? AMINE
L305          0 SEA L303 AND L304


=> S L273 OR L291 OR L300
   1 FILES SEARCHED...
QUERY PROCESSING INTERRUPTED
The system was temporarily unable to process your query.  If this
message appears repeatedly, please notify the Help Desk.  Enter "HELP
STN" for information on contacting the nearest STN Help Desk by
telephone or via SEND in the STNMAIL file.

=> S L273 OR L291 OR L300
   1 FILES SEARCHED...
QUERY PROCESSING INTERRUPTED
The system was temporarily unable to process your query.  If this
message appears repeatedly, please notify the Help Desk.  Enter "HELP
STN" for information on contacting the nearest STN Help Desk by
telephone or via SEND in the STNMAIL file.

=> DUP REM L376 L375 L273 L291 L300
FILE 'MEDLINE' ENTERED AT 15:51:08 ON 04 JUN 2002

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PROCESSING COMPLETED FOR L376
PROCESSING COMPLETED FOR L375
PROCESSING COMPLETED FOR L273
PROCESSING COMPLETED FOR L291
```

PROCESSING COMPLETED FOR L300
COMMAND INTERRUPTED
If this message appears repeatedly, please notify the Help Desk.
Enter "HELP STN" for information on contacting the nearest STN Help Desk by telephone or via SEND in the STNMAIL file.

=> DUP REM L376 L375 L273 L291 L300
PROCESSING COMPLETED FOR L376
PROCESSING COMPLETED FOR L375
PROCESSING COMPLETED FOR L273
PROCESSING COMPLETED FOR L291
PROCESSING COMPLETED FOR L300
L378 24 DUP REM L376 L375 L273 L291 L300 (3 DUPLICATES REMOVED) (Finally!)

=> D IBIB AB CT 1-24

L378 ANSWER 1 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:71928 CAPLUS
DOCUMENT NUMBER: 136:98813
TITLE: Device and methods for subdividing and filtering gel material and extracting molecules therefrom
INVENTOR(S): Bogoev, Roumen A.; Whitney, Scott E.; Amshey, Joseph W.
PATENT ASSIGNEE(S): Invitrogen Corporation, USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002005930	A1	20020124	WO 2001-US22452	20010718
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002040872	A1	20020411	US 2001-906792	20010718

PRIORITY APPLN. INFO.: US 2000-218821P P 20000718

AB An app. and method for mincing a gel includes a gel mincing tube and a mesh material. The mesh material extends across the end of the tube. To subdivide a gel using the mincing app., a gel is placed upon the mesh material in the mincing tube, the mincing tube, mesh material and the gel are spun in a centrifuge, forcing the gel through the mesh material so that the gel is subdivided into generally uniform smaller fragments. The mesh material may be secured to a tube in the form of a nesting tube. The nesting tube nests within the opening of a recovery vessel. The mesh material may be placed in series with a conditionally porous membrane in the nesting tube. Centrifuging the nesting tube and the recovery vessel subdivides gel material into fragments by forcing the gel through the mesh material. The gel subsequently falls upon the membrane, and may be treated on the membrane to ext. or otherwise treat analytes in the gel material.

CT Materials processing

CT Carbohydrates, analysis
CT Macromolecular compounds
CT Peptides, analysis
CT **Nucleic acids**
CT Proteins
CT Acids, uses
CT Group IIIA element compounds
CT Screens (mesh)
CT Alkyl groups
CT Fluoropolymers, uses
CT Glass fibers, uses
CT Chelating agents
CT **Ion exchangers**
CT Porous materials
CT Centrifugation
CT Extractants
CT Extraction
CT Filtration
CT Gels
CT Microtiter plates
CT Molecules
CT Particles
CT Reaction
CT Sample preparation
CT Screens (mesh)
CT Supported reagents
CT Test kits
CT Antibodies
CT Enzymes, uses
CT **Buffers**
CT Solutions
CT Gel electrophoresis
CT Antibodies
CT Carboxyl group
CT Time-of-flight mass spectrometry
CT Polyamide fibers, uses
CT Metals, uses
CT Polymers, uses
CT Textiles
CT Laser ionization mass spectrometry
CT Laser desorption mass spectrometry
CT Materials
CT Functional groups
CT Laser desorption mass spectrometry
CT Containers
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L378 ANSWER 2 OF 24 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-171805 [22] WPIDS
DOC. NO. CPI: C2002-053223
TITLE: Nucleic acids encoding lipase enzymes which are useful as supplements in animal feeds, as agents of flavor modification and for treating Crohn's disease and celiac disease.
DERWENT CLASS: B04 C06 D13 D16
INVENTOR(S): GIVER, L J; MINSHULL, J; VOGEL, K
PATENT ASSIGNEE(S): (MAXY-N) MAXYGEN INC
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002006457	A2	20020124	(200222)*	EN	197

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002006457	A2	WO 2001-US22160	20010713

PRIORITY APPLN. INFO: US 2001-300378P 20010621; US 2000-217954P 20000713

AB WO 200206457 A UPAB: 20020409

NOVELTY - Nucleic acids encoding lipase enzymes, are new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) an isolated or recombinant polypeptide (S1) comprising a sequence having at least 97% amino acid sequence identity to a sequence selected from one of the 34 amino acid sequences (P1) defined in the specification;

(2) an isolated or recombinant polypeptide (S2) comprising a sequence having at least 94% amino acid sequence identity to the mature region of an amino acid sequence selected from one of the 8 amino acid sequences (P2) defined in the specification;

(3) an isolated or recombinant polypeptide (S3) comprising a sequence having at least 85% or 99% amino acid sequence identity to the mature region of an amino acid sequence defined in the specification;

(4) an isolated or recombinant polypeptide (S4) exhibiting enantioselective lipase activity, where the polypeptide comprises:

(a) an amino acid sequence selected from P1 or the additional 21 amino acid sequences (P3) defined in the specification;

(b) at least 45 contiguous amino acid residues of a polypeptide encoded by a coding polynucleotide sequence (N2) selected from:

(i) a sequence selected from one of the 54 nucleotide sequences (N1) defined in the specification, or its complementary nucleotide sequence;

(ii) a sequence that encodes a polypeptide selected from P1 or P3, or its complementary nucleotide sequence; or

(iii) a sequence which hybridizes under stringent conditions over substantially the entire length of a polynucleotide sequence (i) or (ii), or which hybridizes to a subsequence comprising at least 100 nucleotides, where the polynucleotide sequence does not comprise a sequence corresponding to a GenBank accession number (C1);

(5) an isolated or recombinant polypeptide which is at least 99% or more identical over a comparison window of 45 contiguous amino acids to one or more of P1 or P3;

(6) an isolated or recombinant polypeptide (S5) encoded by a nucleic acid (N3) comprising a polynucleotide sequence selected from:

(a) N2;

(b) a polynucleotide sequence comprising all or a fragment of (a), where the fragment encodes a polypeptide comprising lipase activity; and

(c) a polynucleotide sequence encoding a polypeptide, the polypeptide comprising an amino acid sequence which is substantially identical over at least 45 contiguous amino acid residues of a sequence selected from P1 or

P3, where the polynucleotide sequence does not comprise a sequence corresponding to any of C1;

(7) a polynucleotide sequence (N4) encoding a polypeptide comprising lipase activity produced by mutating or recombining N3;

(8) an isolated or recombinant polypeptide (S6) comprising at least 45 contiguous amino acid residues of S5, where the polypeptide sequence does not comprise a sequence corresponding to C1;

(9) a polypeptide which comprises a unique subsequence in a polypeptide selected from P1 or P3, where the unique subsequence is unique as compared to a polypeptide sequence corresponding to an amino acid sequence or encoded by a nucleic acid sequence corresponding to C1;

(10) a polypeptide which is specifically bound by a polyclonal antisera raised against at least one antigen (AG1) comprising at least one amino acid sequence selected from P1 or P3, or its fragment, where the antisera is subtracted with a polypeptide sequence corresponding to an amino acid sequence or encoded by a nucleic acid sequence corresponding to C1;

(11) an antibody or antisera produced by administering S1-S5 to a mammal, where the antibody or antisera specifically binds AG1;

(12) an antibody or antisera which specifically binds a polypeptide comprising an amino acid sequence selected from P1 or P3, where the antibody does not specifically bind to a peptide encoded by a nucleic acid corresponding to C1;

(13) the polynucleotide of N3;

(14) an **isolated** or recombinant **nucleic acid** (N5) comprising a polynucleotide sequence encoding a polypeptide comprising lipase activity produced by mutating or recombining one or more polynucleotides selected from N3;

(15) a composition (CP1) comprising two or more nucleic acids of N3 or N5;

(16) a composition (CP2) produced by cleaving of one or more nucleic acid of N3 or N5;

(17) a composition (CP3) produced by a process comprising incubating one or more nucleic acids of N3 or N5, in the presence of deoxyribonucleotide triphosphates and a nucleic acid polymerase;

(18) a cell comprising at least one nucleic acid of N3 or N5, or a cleaved or amplified fragment or its product;

(19) a vector comprising the nucleic acid of N3 or N5;

(20) a cell transduced by the above vector;

(21) a nucleic acid which comprises a unique subsequence of a sequence selected from N1, where the unique subsequence is unique as compared to a nucleic acid sequence corresponding to C1;

(22) a target nucleic acid (N6) which hybridizes under stringent conditions to a unique coding oligonucleotide which encodes a unique subsequence in a polypeptide selected from P1 or P3, where the unique subsequence is unique as compared to an amino acid sequence or to a polypeptide encoded by a nucleic acid sequence corresponding to C1;

(23) a database comprising one or more character strings corresponding to a polynucleotide sequence selected from N1 or a polypeptide sequence selected from P1 or P3;

(24) a method (M1) for manipulating a sequence record in a computer system;

(25) a method (M2) of producing a modified or recombinant nucleic acid comprising mutating or recombining a nucleic acid of N3;

(26) a modified or recombinant nucleic acid (N7) produced by M2;

(27) a nucleic acid library produced by M2;

(28) a population of cells comprising the above library;

(29) a cell comprising N7;

(30) a method (M3) of producing a polypeptide, comprising introducing N3 or N5, into a population of cells and culturing the cells to produce

the polypeptide;
(31) a polypeptide produced by M3;
(32) a cleaning composition comprising a lipase polypeptide; and
(33) a method of hydrolyzing a lipid to therapeutically or prophylactically treat a gastrointestinal lipid related condition/disease/disorder, comprising expressing in a target cell or contacting a target cell with an effective amount of S1 or S5.
ACTIVITY - Antiinflammatory; gastrointestinal; respiratory.
No biological data given.
MECHANISM OF ACTION - Lipase.
USE - The lipase polypeptides are useful as supplements in animal feeds, as agents of flavor modification and fat modification in human foodstuffs (e.g. cheese), as agents in the creation of food emulsifiers, as agents in tanning/processing leather and as cleaning agents.
They are also useful for treating Crohn's disease, cystic fibrosis, celiac disease and other gastrointestinal mal-absorption problems.
Dwg.0/6

L378 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:781261 CAPLUS
DOCUMENT NUMBER: 135:300656
TITLE: Apparatus and method for solid support sample processing
INVENTOR(S): Neeper, Rob; Lillig, John
PATENT ASSIGNEE(S): Discovery Partners International, Inc., USA
SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001079857	A2	20011025	WO 2001-US40496	20010411

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-549958 A 20000414

AB The present invention concerns an automated sample-on-solid-support processing system comprised of a computer-based control unit and a main unit along with a variable-speed centrifuge having an openable vacuum-tight chamber and a centrifuge rotor with a plurality of multi-sample holding positions, a liq. solvent supply subsystem which feeds solvent to a plurality of dispensing stations in the centrifuge chamber, a temp. control subsystem, and a vacuum subsystem. The app. includes a sample/collection container with a plurality of wells, each for sepg. a sample from its solid support when solvent is dispensed into the wells and the centrifuge is activated at a low speed. Operation of the centrifuge at high speed concs. the cleaved sample in collection wells. In the preferred embodiment, a bar code reader or other identification means, preferably a non-contact reader, can be included in the chamber to allow sample carriers to be identified. Diagrams describing the app. are given.

CT Analytical apparatus
CT **Buffers**
CT Computer application
CT Containers
CT Degassing
CT Detergents
CT Dispensing apparatus
CT **Immobilization, biochemical**
CT Microtiter plates
CT Pipes and Tubes
CT Pressure
CT Process automation
CT Process control
CT Pumps
CT Sampling apparatus
CT Temperature sensors
CT Thermoregulators
CT Vacuum
CT Vapors
CT Water reservoirs
CT Windows
CT **DNA**
CT Spheres
CT Construction materials
CT Chemistry
CT Reagents
CT Process control
CT Magnetic disks
CT Electric lamps
CT Heaters
CT Collecting apparatus
CT Frequency
CT Bar code labels
CT Centrifuges
CT Columns and Towers
CT Holders
CT Gases

L378 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:168188 CAPLUS
DOCUMENT NUMBER: 134:204760
TITLE: Methods of immobilizing ligands on solid supports and apparatus and methods of use therefor
INVENTOR(S): Abrams, Ezra S.; Zhang, Tianhong; Mielewczyk, Slawomir; Patterson, Brian C.
PATENT ASSIGNEE(S): Mosaic Technologies Inc., USA
SOURCE: PCT Int. Appl., 98 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001016372	A1	20010308	WO 2000-US23627	20000828

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,

SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1208238 A1 20020529 EP 2000-957879 20000828
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL
PRIORITY APPLN. INFO.: US 1999-151267P P 19990827
US 2000-177844P P 20000125
WO 2000-US23627 W 20000828

AB A method is provided for immobilizing a ligand, e.g., a nucleic acid, on a solid support. The method includes providing a solid support contg. an immobilized latent thiol group, activating the thiol group, contacting the activated thiol group with a nucleic acid comprising an acrylamide functional group, and forming a covalent bond between the two groups, thereby immobilizing the nucleic acid to the solid support. Kits contg. the solid supports and method of utilizing the solid supports are also provided. Amino-functional polystyrene microspheres were reacted with N-succinimidyl S-acetylthiopropionate to make latent thiol microspheres. The latent thiol microspheres were activated with hydroxylamine HCl before reaction with acrylamide-modified oligonucleotide primer.

CT Functional groups
CT Primers (nucleic acid)
CT Nucleic acids
CT Glass, uses
CT Metals, uses
CT Plastics, uses
CT Nucleic acids
CT Samples
CT cDNA
CT Silanes
CT **Nucleic acids**
CT Ligands
CT Polymers, uses
CT Affinity
CT Genome
CT Analytical apparatus
CT Biosensors
CT DNA microarray technology
CT DNA sequence analysis
CT Diagnosis
CT Genetic mapping
CT **Immobilization, biochemical**
CT Nucleic acid amplification (method)
CT Nucleic acid hybridization
CT Polymerization
CT Reducing agents
CT Hydroxamic acids
CT Isocyanides
CT Nitriles, reactions
CT Gene
CT Microspheres
CT Hydroxyl group
CT Sulfhydryl group
CT **Amines, reactions**
CT Disulfides
CT Genetic mapping
CT Carbonyl compounds (organic), reactions

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L378 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:645576 CAPLUS
DOCUMENT NUMBER: 135:207838
TITLE: Apparatus and method for removing small molecules and ions from low volume biological samples
INVENTOR(S): Smolko, Daniel; Sheldon, Ed; Swanson, Paul; Mehta, Prashant P.; Jimenez, Manuel; Bloch, Kenneth A.; Westin, Lorelei; Landis, Geoffrey C.
PATENT ASSIGNEE(S): Nanogen, Inc., USA
SOURCE: U.S., 13 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6284117	B1	20010904	US 1999-469588	19991222

AB This invention provides an app. and method for desalting a low vol. soln. for use in connection with an electronically addressable microarray. The app. comprises a tubular mol. wt. cut-off membrane embedded within a ion exchange resin filled chamber. The app. provides a very high surface to vol. ratio of membrane pore surface to exchange resin capacity for absorbing charged mols. The design facilitates the speedy removal of charged mols. from test solns. with the resultant desalted soln. having a very low ionic strength suitable for use in the electronic transport of nucleic acids, proteins, and cells.

CT Molecules
CT Apparatus
CT DNA microarray technology
CT Pipes and Tubes
CT Absorption
CT Anion exchangers
CT Apparatus
CT Biological materials
CT **Buffers**
CT Cation exchangers
CT Cell
CT Coils
CT Containers
CT Electric conductivity
CT Electrodes
CT Flow
CT Grains (particles)
CT Interface
CT **Ion exchangers**
CT Ionic strength
CT Ions
CT Molecular weight
CT Molecules
CT Nucleic acid amplification (method)
CT PCR (polymerase chain reaction)
CT Pore
CT Powders
CT Solutions
CT Volume
CT Polymers, uses

CT **DNA**
CT **Nucleic acids**
CT Proteins, general, preparation
CT Electric current
CT Electrodialysis
CT Salts, processes
CT Electronics
CT Membranes, nonbiological
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L378 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:932407 CAPLUS
DOCUMENT NUMBER: 136:50671
TITLE: Nucleic acid isolation using cationic immobilization support
INVENTOR(S): Katayori, Satoshi; Murata, Mitsuhiro; Ozaki, Ichiro; Higata, Mikio; Fan, Kejun; Nishida, Shozo
PATENT ASSIGNEE(S): Jsr Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

possible art - but date may not be good.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001352979	A2	20011225	JP 2001-115966	20010413
JP 2002017400	A2	20020122	JP 2001-115965	20010413

PRIORITY APPLN. INFO.: JP 2000-112556 A 20000413
AB A method for nucleic acid isolation using cationic immobilization support is disclosed. Nucleic acid bound to the support is released by treatment with a water sol. anionic substance. Cationic substances such as amino or imino compds. are linked to the support. Isolation of a plasmid using cationic magnetic particles contg. tri-Me aminoethyl methacrylate, polyethyleneimine, or carbodiimide reagent (1-ethyl-3(3-dimethylaminopropyl)carbodiimide hydrochloride) is described.
CT Carbodiimides
CT **Amines, uses**
CT Magnetic particles
CT Functional groups
CT Cations
CT **Immobilization, molecular**
CT **Nucleic acids**

L378 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:643430 CAPLUS
DOCUMENT NUMBER: 135:191272
TITLE: Isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces
INVENTOR(S): Baker, Matthew John
PATENT ASSIGNEE(S): UK
SOURCE: U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U.S. Ser. No. 586,009.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

Your Inventor

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001018513	A1	20010830	US 2000-736632	20001214
WO 9929703	A2	19990617	WO 1998-GB3602	19981204
WO 9929703	A3	19990826		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: GB 1997-25839 A 19971206
GB 1998-15541 A 19980717
WO 1998-GB3602 W 19981204
US 2000-586009 A2 20000602

AB A method for extg. nucleic acids from a biol. material such as blood comprises contacting the mixt. with a material at a pH such that the material is pos. charged and will bind neg. charged nucleic acids and then eluting the nucleic acids at a pH when the said materials possess a neutral or neg. charge to release the nucleic acids. The nucleic acids can be removed under mildly alk. conditions to the maintain integrity of the nucleic acids and to allow retrieval of the nucleic acids in reagents that are immediately compatible with either storage or anal. testing. The use of surfaces modified with zwitterionic buffers is demonstrated.

CT Paramagnetic materials
CT **Buffers**
CT **Ion exchangers**
CT Blood analysis
CT Sorbents
CT **DNA**
CT **Nucleic acids**
CT **RNA**
CT Peptides, uses
CT **Amines, uses**
CT **DNA**
CT Glass, uses
CT Carboxyl group

L378 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 2000:824403 CAPLUS
DOCUMENT NUMBER: 134:2335
TITLE: Cell concentration and lysate clearance using paramagnetic particles
INVENTOR(S): Bitner, Rex M.; Smith, Craig E.; Sankbeil, Jacqui; Butler, Braeden L.; White, Douglas H.
PATENT ASSIGNEE(S): Promega Corporation, USA
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000070040	A1	20001123	WO 1999-US31207	19991230

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,

DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1179058 A1 20020213 EP 1999-967755 19991230
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

US 6284470 B1 20010904 US 2000-645133 20000824

PRIORITY APPLN. INFO.: US 1999-134156P P 19990514
US 1999-475958 A 19991230
US 1998-64449 A2 19980422
WO 1999-US31207 W 19991230

AB Methods are disclosed for using paramagnetic particles to conc. or harvest cells. Methods are also disclosed for clearing a soln. of disrupted biol. material, such as a lysate of cells or a homogenate of mammalian tissue. Methods are also disclosed for using paramagnetic particles to isolate target nucleic acids, such as RNA or DNA, from a soln. cleared of disrupted biol. material using the same type or a different type of paramagnetic particle. Kits are also disclosed for use with the various methods of the present invention. Nucleic acids isolated according to the present methods and using the present kits are suitable for immediate use in downstream processing, without further purifn.

CT Absorption
CT Absorption spectroscopy
CT Adsorption
CT Animal cell
CT Animal tissue
CT Bacteria (Eubacteria)
CT Biological materials
CT Blood
CT Blood cell
CT Cell
CT Concentration (process)
CT Containers
CT Culture media
CT Desorption
CT Gel electrophoresis
CT Genome
CT Homogenization
CT Leukocyte
CT Magnetic force
CT Magnetic particles
CT Mammal (Mammalia)
CT Plasmids
CT Precipitation (chemical)
CT Solutions
CT Test kits
CT Washing
CT pH
CT **DNA**
CT **Nucleic acids**
CT **RNA**
CT Silica gel, reactions
CT Lipids, processes
CT Proteins, general, processes
CT **Ion exchangers**

CT Particles
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L378 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
ACCESSION NUMBER: 2000:824267 CAPLUS
DOCUMENT NUMBER: 133:360593
TITLE: pH-dependent ion exchange matrix and method of synthesis and use for isolation of nucleic acids
INVENTOR(S): Smith, Craig E.; Holmes, Diana L.; Simpson, Daniel J.; Katzhendler, Jehoshua; Bitner, Rex M.; Grosch, Josephine C.
PATENT ASSIGNEE(S): Promega Corp., USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000069872	A2	20001123	WO 2000-US12186	20000505
WO 2000069872	A3	20010215		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6310199	B1	20011030	US 1999-312172	19990514
EP 1179057	A2	20020213	EP 2000-935865	20000505
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2001014650	A1	20010816	US 2001-813077	20010320

PRIORITY APPLN. INFO.: US 1999-312172 A 19990514
WO 2000-US12186 W 20000505

Possible art, but date may not be good.

AB PH-dependent ion exchange matrixes are provided, with methods for making such matrixes, and methods for using such matrixes to isolate a target nucleic acid, as such as plasmid DNA, chromosomal DNA, or RNA from contaminants, including proteins, lipids, cellular debris, or other nucleic acids. Each pH-dependent ion exchange matrix of this invention comprises at least two different ion exchange functional groups, one of which is capable of acting as an anion exchanger at a first pH, and the other of which is capable of acting as a cation exchanger at a second, higher pH. The matrix has an overall neutral charge in a pH range between the first and second pH. The pH-dependent ion exchange matrixes of the present invention are designed to bind to the target nucleic acid at a pH wherein the overall charge of the matrix is pos., and to release the target nucleic acid as the pH of the surrounding soln. is increased. The target nucleic acid can be released from the pH dependent matrix in little or no salt and at about a neutral pH. The matrixes and methods of this invention enable one to isolate a target nucleic acid in very few steps, without the use of hazardous chems. Target nucleic acids isolated using the pH-dependent ion exchange matrixes according to the present invention can be used immediately without further extn. or isolation. Thus, to prep. the title matrix, silica-coated magnetic particles were reacted with

3-glycidylpropyltrimethoxysilane and the resulting glycidyl-modified particles were reacted with DL-histidine. This matrix was used to isolate plasmid DNA from a cell lysate. The plasmid DNA was bound to the matrix at pH 4.8 and released when the pH was increased to 8.0. The plasmid was free of protein and RNA contamination.

CT **Ion exchangers**
CT Plasmid vectors
CT **DNA**
CT **Nucleic acids**
CT **RNA**
CT Particles
CT Glass fibers, reactions
CT Silica gel, reactions

L378 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:824404 CAPLUS
DOCUMENT NUMBER: 134:2336
TITLE: Mixed-bed solid phase and its use in the isolation of nucleic acids
INVENTOR(S): Smith, Craig E.; Holmes, Diana L.; Simpson, Daniel J.; Katzhendler, Jehoshua; Bitner, Rex M.; Grosch, Josephine C.
PATENT ASSIGNEE(S): Promega Corporation, USA
SOURCE: PCT Int. Appl., 93 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000070041	A1	20001123	WO 2000-US12954	20000512
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6270970	B1	20010807	US 1999-312139	19990514
EP 1179056	A1	20020213	EP 2000-930626	20000512
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2002001812	A1	20020103	US 2001-912045	20010724
US 6376194	B2	20020423		

PRIORITY APPLN. INFO.: US 1999-312139 A 19990514
WO 2000-US12954 W 20000512

AB Mixed-bed solid phases are provided, with methods for using such solid phases to isolate target nucleic acids, such as plasmid DNA, chromosomal DNA, RNA, or nucleic acids generated by enzymic amplification from contaminants, including proteins, lipids, cellular debris, or other nucleic acids. The mixed-bed solid phases of this invention are mixts. of at least two different solid phases, each of which has a capacity to bind to the target nucleic acid under different soln. conditions, and the capacity to release the nucleic acid under similar elution conditions. By exchanging soln. conditions according to the methods of this invention, one can remove contaminants from the target nucleic acid bound to the

mixed-bed solid phase, then elute the target nucleic acid in an elution buffer.

CT Recombination, genetic
CT Denaturants
CT Separation
CT Toxins
CT Flow
CT Pressure
CT **Anion exchange**
CT **Buffers**
CT Cell
CT Centrifugation
CT Chromosome
CT Coating materials
CT Columns and Towers
CT Containers
CT Filtration
CT Flow
CT **Ion exchangers**
CT Magnetic force
CT Magnetic particles
CT Mixtures
CT Plasmids
CT Separation
CT Solutions
CT Vacuum
CT pH
CT Amines, uses
CT Ligands
CT Salts, uses
CT Siliceous materials
CT **DNA**
CT Gene
CT **Nucleic acids**
CT **RNA**
CT Lipids, processes
CT Proteins, general, processes
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L378 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:574025 CAPLUS
DOCUMENT NUMBER: 133:147262
TITLE: Automated high throughput mass spectrometry for chemical screening
INVENTOR(S): Raillard, Sun Ai; Chen, Yong Hong; Krebber, Claus
PATENT ASSIGNEE(S): Maxygen Inc., USA
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000048004	A1	20000817	WO 2000-US3686	20000211

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,

MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1151306 A1 20011107 EP 2000-913451 20000211
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: US 1999-119766P P 19990211
US 1999-148848P P 19990812
WO 2000-US3686 W 20000211

AB App. and methods for high throughput mass spectrometry are provided. The methods involve sample prepn. in an off-line parallel purifn. system. Such methods include but are not limited to the use of an appropriate buffer when generating samples or the use of a solid support for tagged components. The samples prepd. in this way do not then need to be column sepd. The app. provided includes a cell growth plate for growing cells and generating products and/or reactants, an off-line parallel purifn. system, a mass spectrometer, and an automatic sampler that transports samples and injects them into the mass spectrometer of the app. The methods and app. described are used, for example, in screening enzyme reaction pathways.

CT Gene
CT Analytical apparatus
CT Bacteria (Eubacteria)
CT Cell
CT Cell proliferation
CT Collision-induced dissociation
CT Combinatorial library
CT Electrospray ionization mass spectrometry
CT Flow injection analysis
CT **Immobilization, biochemical**
CT Magnetic particles
CT Membranes, nonbiological
CT Microtiter plates
CT Process automation
CT Pseudomonas
CT Sample preparation
CT Gene
CT Polynucleotides
CT Carbohydrates, analysis
CT Lipids, analysis
CT **Nucleic acids**
CT Oligosaccharides, analysis
CT Polyketides
CT Proteins, general, analysis
CT Enzymes, biological studies
CT Avidins
CT Mass spectrometry
CT Molecules
CT Mass spectrometers
CT **Buffers**

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L378 ANSWER 12 OF 24 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 3
ACCESSION NUMBER: 1999-394954 [33] WPIDS
DOC. NO. CPI: C1999-116060
TITLE: Extracting biomolecules from biological material.

DERWENT CLASS: A88 A96 B04 C07 D13 D15 D16 J04
INVENTOR(S): BAKER, M J
PATENT ASSIGNEE(S): (DNAR-N) DNA RES INSTR LTD; (BAKE-I) BAKER M J
COUNTRY COUNT: 82
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9929703	A2	19990617	(199933)*	EN	14
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
AU 9913447	A	19990628	(199946)		
NO 2000002540	A	20000707	(200045)		
EP 1036082	A2	20000920	(200047)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
CN 1281462	A	20010124	(200130)		
US 2001018513	A1	20010830	(200151)		
KR 2001032806	A	20010425	(200164)		
BR 9815569	A	20011009	(200168)		
MX 2000005474	A1	20010201	(200168)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 9929703	A2		WO 1998-GB3602	19981204
AU 9913447	A		AU 1999-13447	19981204
NO 2000002540	A		WO 1998-GB3602	19981204
			NO 2000-2540	20000516
EP 1036082	A2		EP 1998-957019	19981204
			WO 1998-GB3602	19981204
CN 1281462	A		CN 1998-811893	19981204
US 2001018513	A1	CIP of	WO 1998-GB3602	19981204
		CIP of	US 2000-586009	20000602
			US 2000-736632	20001214
KR 2001032806	A		KR 2000-706123	20000605
BR 9815569	A		BR 1998-15569	19981204
			WO 1998-GB3602	19981204
MX 2000005474	A1		MX 2000-5474	20000602

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9913447	A	Based on	WO 9929703
EP 1036082	A2	Based on	WO 9929703
BR 9815569	A	Based on	WO 9929703

PRIORITY APPLN. INFO: GB 1998-15541 19980720; GB 1997-25839 19971206

AB WO 9929703 A UPAB: 19990819
NOVELTY - A method for the extraction of biomolecules from biological material, comprises contacting the biological material with a solid phase which is able to bind the biomolecules to it at a first pH and then extracting the biomolecules bound to the solid phase by elution using an elution solvent at a second pH.

USE - The process is used to **isolate** and identify **DNA** from samples, e.g. animals, plants, feces, tissue, soil, foodstuff or water.
Dwg.0/0

L378 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:577097 CAPLUS
DOCUMENT NUMBER: 131:196697
TITLE: Method and apparatus for the purification and detection of nucleic acids and peptides using reversible affinity gel electrophoresis
INVENTOR(S): Abrams, Ezra S.; Hammond, Philip W.; Muir, Andrew R.; Boles, T. Christian
PATENT ASSIGNEE(S): Mosaic Technologies, USA
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9945374	A2	19990910	WO 1999-US4849	19990303
WO 9945374	A3	20000217		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2322975	AA	19990910	CA 1999-2322975	19990303
AU 9928963	A1	19990920	AU 1999-28963	19990303
EP 1068518	A2	20010117	EP 1999-909853	19990303
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002506204	T2	20020226	JP 2000-534862	19990303

PRIORITY APPLN. INFO.: US 1998-76614P P 19980303
WO 1999-US4849 W 19990303

AB An affinity electrophoresis process is described, in which the direction of electrophoresis is varied in a cyclical manner while synchronously changing one or more property of the electrophoretic medium between two states, said states being characterized as favoring or disfavoring specific reversible binding of sample analytes to affinity ligands which are immobilized within the medium. The resulting process enables extremely efficient and convenient sepn. of the specific analytes for detection or purifn., using simple materials and app. Parameters as temp., pH, ionic strength, detergent or denaturant concn. are altered along with the change of polarity. Analytes are labeled with various reporter mols., e.g fluorescent dyes, enzymes, amplifiable mols. Examples for labels are fluorescein, alk. phosphatase, substrate of Q-beta replicase. The electrophoretic app. is computer driven; cycles are programed according to the mixt. to be sepd. for preparative or anal. purposes. The app. incorporates various units: electrophoretic medium with the immobilized ligand; power supply; electrode system; buffer reservoirs; addnl. reservoirs, e.g. for urea or formamide, detergents; Peltier-effect heating/cooling unit. The method and app. can be applied

in one, two or three dimensions. Thus an oligonucleotide was covalently immobilized to polyacrylamide gel. A second oligonucleotide, not complementary to the immobilized one, was labeled with fluorescein and loaded onto the first lane. A third oligonucleotide, complementary to the immobilized one, was also labeled with fluorescein and loaded onto the second lane. The third lane was loaded with the mixt. of the two fluorescein labeled oligonucleotides. In step one, the temp. was set to 45.degree.C and elec. field was applied for 43 min at 100 V. In step two, the temp. was maintained at 25.degree.C; the elec. field was applied for 50 min and 100 V with opposite polarity. After three such cycles the two fluorescein labeled oligonucleotides were sepd.

CT Affinity
CT **Buffers**
CT Chelating agents
CT Control apparatus
CT Denaturants
CT Detergents
CT Drugs
CT Electrodes
CT Gel electrophoresis
CT Gel electrophoresis apparatus
CT **Immobilization, biochemical**
CT Ionic strength
CT Nucleic acid hybridization
CT Polarity
CT Purification
CT Temperature
CT Thermoelectric devices
CT pH
CT **DNA**
CT Peptides, analysis
CT Oligonucleotides
CT Proteins, general, analysis
CT **RNA**
CT Amino acids, uses
CT Antibodies
CT Enzymes, uses
CT Hormones, animal, uses
CT Lipids, uses
CT Polysaccharides, uses
CT **DNA**

L378 ANSWER 14 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:720136 CAPLUS
DOCUMENT NUMBER: 131:308589
TITLE: One step device and process for concentration and purification of biological molecules
INVENTOR(S): Coffman, Jonathan L.
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5981736	A	19991109	US 1998-104795	19980625
PRIORITY APPLN. INFO.:			US 1997-51765P P	19970627

Searched by Thom Larson, STIC, 308-7309

AB A device for one step purifn. of a desired biol. mol. from a sample, wherein the device comprises a housing loaded with an adsorptive media of a known vol. on top of a size exclusion media of a known vol., and a method of purifying biol. mols. using the same.
CT Plates
CT Apparatus
CT Adsorbents
CT Affinity
CT Apparatus
CT Biochemical molecules
CT **Buffers**
CT Chelating agents
CT Concentration (process)
CT Concentrators
CT Frits
CT **Ion exchangers**
CT Plasmids
CT Porous materials
CT Purification
CT Size-exclusion chromatography
CT Surfactants
CT Polyoxyalkylenes, uses
CT **DNA**
CT Gene
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L378 ANSWER 15 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:468765 CAPLUS
DOCUMENT NUMBER: 131:85137
TITLE: Method and apparatus for nucleic acid extraction and analysis using sonication and glass beads
INVENTOR(S): Kiesewetter, Stefan; Vohrer, Uwe; Schuele, Andreas; Gueth, Achim; Michniewski, Marius; Dobler, Hannes; Lindner, Hans
PATENT ASSIGNEE(S): Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V., Germany
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19801730	A1	19990722	DE 1998-19801730	19980119

AB The invention concerns a method and app. for the extn. of nucleic acids, their purifn., and PCR amplification by inserting the cell suspension into the test tubes of a thermoregulated equipment; the test tubes contain adsorbing beads, cells are disrupted using sonication; DNA adsorbs onto the beads; beads with DNA are sepd. from the cell debris; washing steps are performed in the same test tube; followed by PCR in the same unit. Adsorbing beads are prepd. from glass with immobilized affinity ligands. The tubes contain a filtration unit for the sepn. of the cell debris, and buffer solns. Buffers contain 100 mM sodium or potassium phosphate, 3 M sodium chloride at pH 5-8; the cell suspension contains 102-109 cells. For ultrasound energy supply an ultrasound bath or a sonication tip is used; sonication is performed 2-10 min. at 10-30 kHz. After DNA extn., beads are air dryed. The PCR mix contains fluorescent labeled reactants;

detection is performed fluorometric via the transparent glass tubes and a monitoring slit.
CT Extraction
CT Adsorption
CT Analytical apparatus
CT **Buffers**
CT Cell
CT Filtration
CT Fluorometry
CT **Immobilization, biochemical**
CT PCR (polymerase chain reaction)
CT Purification
CT Sonication
CT Glass beads
CT **DNA**
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L378 ANSWER 16 OF 24 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:35371 BIOSIS
DOCUMENT NUMBER: PREV199900035371
TITLE: Noncovalent RNA-peptide complexes detected by matrix-assisted laser desorption/ionization mass spectrometry.
AUTHOR(S): Thiede, Bernd (1); Von Janta-Lipinski, Martin
CORPORATE SOURCE: (1) Max-Delbrueck-Centrum Mol. Med., Robert-Rossle-Str. 10, D-13122 Berlin Germany
SOURCE: Rapid Communications in Mass Spectrometry, (1998) Vol. 12, No. 23, pp. 1889-1894.
ISSN: 0951-4198.
DOCUMENT TYPE: Article
LANGUAGE: English
AB **Matrix**-assisted laser desorption/ionization mass spectrometry (MALDI-MS) was used to explore noncovalent interactions between different peptides and ribose nucleic acids (RNAs). One RNA was mixed together with two or more peptides or vice versa to compare the different effects of the molecules for noncovalent complex formation. The **matrix** 2,4,6-trihydroxyacetophenone was considered optimal for these studies due to the fact that peptides and RNA showed roughly the same peak intensities, in negative ion mode, as well as RNA-peptide complexes being detected. The formation of the noncovalent RNA-peptide complexes showed a correlation with the number of the basic amino acids arginine, lysine and **histidine**. The strongest influence of these amino acids for complex formation was obtained with arginine. Although different RNA molecules were used with different compositions and secondary structures, no specific effects to complex formation was observed. The comparison of noncovalent complexes with covalent RNA-peptide complexes, which were obtained from ribosomal subunits after cross-linking and enzymatic cleavages, showed that the specific RNA-protein interactions are dependent on the three-dimensional structure of the ribosome and its components. The results of this report indicate that MALDI-MS may be useful for the study of noncovalent interactions, in particular for peptides and RNA.
IT Major Concepts
Biochemistry and Molecular Biophysics; Methods and Techniques
IT Chemicals & Biochemicals
bradykinin: Bachem, analysis; horse renin: Bachem, analysis; human ACTH (11-24): Bachem, analysis; human ACTH (18-39): Bachem, analysis; kemptide: Bachem, analysis; noncovalent RNA-peptide complexes: analysis, detection; peptides: analysis; substance P: Bachem, analysis; **RNA**: analysis, synthesis, **purification**;

2,3,4-trihydroxyacetophenone: Aldrich, matrix; 2,4,6-trihydroxyacetophenone: Fluka, matrix; 2,5-dihydroxybenzoic acid: Aldrich, matrix; 3-hydroxypicolinic acid: Fluka, matrix

L378 ANSWER 17 OF 24 MEDLINE
ACCESSION NUMBER: 96063877 MEDLINE
DOCUMENT NUMBER: 96063877 PubMed ID: 7495562
TITLE: Sequence-specific purification of nucleic acids by PNA-controlled hybrid selection.
AUTHOR: Orum H; Nielsen P E; Jorgensen M; Larsson C; Stanley C; Koch T
CORPORATE SOURCE: PNA Diagnostics A/S, Copenhagen, Denmark.
SOURCE: BIOTECHNIQUES, (1995 Sep) 19 (3) 472-80.
Journal code: AN3; 8306785. ISSN: 0736-6205.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199601
ENTRY DATE: Entered STN: 19960217
Last Updated on STN: 19970203
Entered Medline: 19960118

AB Using an **oligohistidine** peptide nucleic acids (**oligohistidine**-PNA) chimera, we have developed a rapid hybrid selection method that allows efficient, sequence-specific purification of a target nucleic acid. The method exploits two fundamental features of PNA. First, that PNA binds with high affinity and specificity to its complementary nucleic acid. Second, that amino acids are easily attached to the PNA oligomer during synthesis. We show that a (His)6-PNA chimera exhibits strong binding to chelated Ni2+ ions without compromising its native PNA hybridization properties. We further show that these characteristics allow the (His)6-PNA/DNA complex to be purified by the well-established method of metal ion affinity chromatography using a Ni(2+)-NTA (nitrilotriactic acid) resin. Specificity and efficiency are the touchstones of any nucleic acid purification scheme. We show that the specificity of the (His)6-PNA selection approach is such that oligonucleotides differing by only a single nucleotide can be selectively purified. We also show that large RNAs (2224 nucleotides) can be captured with high efficiency by using multiple (His)6-PNA probes. PNA can hybridize to nucleic acids in low-salt concentrations that destabilize native nucleic acid structures. We demonstrate that this property of PNA can be utilized to purify an oligonucleotide in which the target sequence forms part of an intramolecular stem/loop structure.

CT Base Composition
Base Sequence
Binding Sites
Chimeric Proteins
Chromatography, Affinity
Heat
Histidine
Molecular Sequence Data
Nickel
Nitrilotriacetic Acid
*Nucleic Acid Hybridization
***Nucleic Acids: IP, isolation & purification**
Nucleic Acids: ME, metabolism
Oligonucleotide Probes
Oligonucleotides: CH, chemistry
Oligonucleotides: ME, metabolism
*Peptides

Peptides: ME, metabolism
RNA: CH, chemistry
RNA: ME, metabolism

L378 ANSWER 18 OF 24 MEDLINE
ACCESSION NUMBER: 91119170 MEDLINE
DOCUMENT NUMBER: 91119170 PubMed ID: 2278382
TITLE: Separation of DNA fragments by high-resolution ion-exchange chromatography on a nonporous QA column.
AUTHOR: Ohmiya Y; Kondo Y; Kondo T
CORPORATE SOURCE: Department of Physical Biochemistry, Gunma University, Maebashi, Japan.
SOURCE: ANALYTICAL BIOCHEMISTRY, (1990 Aug 15) 189 (1) 126-30. Journal code: 4NK; 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199103
ENTRY DATE: Entered STN: 19910329
Last Updated on STN: 19910329
Entered Medline: 19910301

AB A nonporous QA column (a strong anion exchanger) was used for HPLC of DNA fragments. This column was successfully employed to separate small (ca. 10 bp) and intermediate size (ca. 10 kbp) DNA fragments from each other. The column also separated double-stranded DNA from its single-stranded form, and circular DNA molecules from linear ones. The entire separation process was completed within 60 min. The recovery of DNA fragments in each run was above 95%. High resolution was obtained both at an analytical level (microgram scale) and at a preparative level (100 micrograms scale). In view of time efficiency, recovery, and resolution, the nonporous QA column is superior to other porous ion-exchange columns and expected to be a very useful tool in molecular biological studies.

CT Check Tags: Support, Non-U.S. Gov't
Anions
Buffers
Chromatography, High Pressure Liquid: MT, methods
Chromatography, Ion Exchange: MT, methods
***DNA: IP, isolation & purification**
DNA, Circular: IP, isolation & purification
DNA, Superhelical: IP, isolation & purification
Ethanolamines
Hydrogen-Ion Concentration
Osmolar Concentration
Reproducibility of Results
Sodium Chloride

L378 ANSWER 19 OF 24 MEDLINE
ACCESSION NUMBER: 87109660 MEDLINE
DOCUMENT NUMBER: 87109660 PubMed ID: 2433301
TITLE: Interaction of DNA with hydroxyapatite. Studies on the effect of the phosphate concentration of the column equilibration and washing buffer.
AUTHOR: Obi F O
SOURCE: JOURNAL OF CHROMATOGRAPHY, (1986 Nov 21) 369 (2) 321-6. Journal code: HQF; 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 198703
ENTRY DATE: Entered STN: 19900303
Last Updated on STN: 19900303
Entered Medline: 19870305

AB The ability of hydroxyapatite to bind DNA effectively in phosphate solutions used for column equilibration, sample loading and column washing has been examined. It was demonstrated that substantial amounts of DNA (up to 40%) were eluted in the washing buffer when the phosphate concentration in the lysing solution or urea-phosphate used for column equilibration, sample loading and column washing was 0.24 M. A reduction in the phosphate concentration from 0.24 to 0.15 M in urea-phosphate solution led to almost 100% binding, whereas a similar reduction in the lysing solution did not. A modified method for loading and eluting DNA from hydroxyapatite columns is presented.

CT Check Tags: Animal
Absorption
Buffers
Cattle
***DNA: IP, isolation & purification**
Durapatite
Hydroxyapatites
Phosphates
Proteins: IP, isolation & purification
RNA: IP, isolation & purification
Thymus Gland: AN, analysis

L378 ANSWER 20 OF 24 MEDLINE
ACCESSION NUMBER: 85289653 MEDLINE
DOCUMENT NUMBER: 85289653 PubMed ID: 4030951
TITLE: High-performance liquid chromatography of tRNAs on novel stationary phases.
AUTHOR: el Rassi Z; Horvath C
CONTRACT NUMBER: CA 21948 (NCI)
GM 20993 (NIGMS)
SOURCE: JOURNAL OF CHROMATOGRAPHY, (1985 Jun 19) 326 79-90.
Journal code: HQF; 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198510
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19851011

AB Rapid separation of a group of tRNAs was carried out on novel siliceous bonded stationary phases with aqueous eluents by using gradient elution with increasing or decreasing salt gradient, as usual in electrostatic interaction chromatography or hydrophobic interaction chromatography, respectively. The stationary phases consist of microparticulate macroporous silica with surface-bound polar moieties, containing weak cationic and/or hydrophobic binding sites. Depending on the nature of the binding sites, the stationary phases exhibit different retention behavior and selectivity for tRNAs. Aqueous phosphate solutions were used as the eluent, and in many cases isocratic elution was sufficient to separate seven tRNAs. Addition of magnesium ions or n-decylbetaine to the eluent resulted in lower retention, the latter causing a greater increase in the eluent strength. The optimum pH range of the eluent was 5.5-6.5.

CT Check Tags: Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Betaine
Chromatography, High Pressure Liquid: MT, methods

Hydrogen-Ion Concentration
Ion Exchange
Magnesium
Oligonucleotides: IP, isolation & purification
***RNA, Transfer: IP, isolation & purification**
Solvents
Temperature

L378 ANSWER 21 OF 24 MEDLINE
ACCESSION NUMBER: 82257445 MEDLINE
DOCUMENT NUMBER: 82257445 PubMed ID: 7104353
TITLE: Fractionation of chromatin, released by nuclease digestion, on ECTHAM-cellulose. Separation of active and inactive chromatin.
AUTHOR: Smith A J; Billett M A
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA, (1982 May 31) 697 (2) 134-47.
Journal code: A0W; 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198210
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19970203
Entered Medline: 19821021

AB Chromatin released by two nucleases under various ionic conditions has been fractionated by chromatography on ECTHAM-cellulose. Mg2+ -soluble chromatin, which according to Gottesfeld and Partington is enriched in transcribed DNA sequences (Gottesfeld, J.M. and Partington, G.A., (1977) Cell 12, 953-962) and produced by DNAase II digestion at intermediate ionic strength, comprises material eluting from ECTHAM-cellulose at 80-100 mM Cl-, pH 6.8-7.0, whereas bulk, Mg2+ -insoluble chromatin comprises more tightly binding material. Free hnRNP particles elute at 30 mM Cl-, pH 6.8. Oligonucleosomes, which according to Dimitriadis and Tata are enriched in transcribed sequences (Dimitriadis, G.J. and Tata, J.R. (1980) Biochem. J. 187, 467-477) and produced by micrococcal nuclease digestion at physiological ionic strength, also elute predominantly at 80-100 mM Cl-, pH 6.8-7.0. When liver nuclei are digested with micrococcal nuclease at low ionic strength, the most rapidly released chromatin is enriched in nascent RNA and hnRNP particles, and binds weakly to ECTHAM-cellulose. More slowly solubilised chromatin, containing fewer hnRNP particles, binds much more strongly to ECTHAM-cellulose. In confirmation of results with mechanically sheared chromatin, the affinity of particular chromatin fractions is not dependent on the size of chromatin particles, rather it reflects the differing composition, and in particular the non-histone protein and hnRNP content, which, we propose, determines the conformation adopted by different chromatin fractions in the cation conditions used for elution from ECTHAM-cellulose.

CT Check Tags: Animal; Support, Non-U.S. Gov't
Cellulose: AA, analogs & derivatives
*Chromatin: AN, analysis
Chromatography, Ion Exchange: MT, methods
***DNA: IP, isolation & purification**
Histones: IP, isolation & purification
*Liver: AN, analysis
Magnesium
*Micrococcal Nuclease: ME, metabolism
Molecular Weight
*Nucleoproteins: IP, isolation & purification

Nucleosomes: UL, ultrastructure
Osmolar Concentration
Rats
Tromethamine: AA, analogs & derivatives

Is old name for TRIS - derivative or analog may be the ECTHAM-cellulose see supplemental search.

L378 ANSWER 22 OF 24 MEDLINE
ACCESSION NUMBER: 74173388 MEDLINE
DOCUMENT NUMBER: 74173388 PubMed ID: 4831352
TITLE: Hydroxylapatite-catalyzed degradation of ribonucleic acid.
AUTHOR: Martinson H G; Wagenaar E B
SOURCE: BIOCHEMISTRY, (1974 Apr 9) 13 (8) 1641-5.
Journal code: A0G; 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197407
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19740726

CT **Adsorption**
Buffers
Calcium
Catalysis
Cesium
Chemistry
Chromatography
DNA
Heat
*Hydroxyapatites
Molecular Weight
Nucleic Acid Hybridization
Osmolar Concentration
Phosphates
Plant Viruses
Potassium
Potassium Chloride
RNA: AN, analysis
RNA: IP, isolation & purification
***RNA, Viral: IP, isolation & purification**
Reoviridae
Sodium
Tobacco Mosaic Virus

L378 ANSWER 23 OF 24 MEDLINE
ACCESSION NUMBER: 74268985 MEDLINE
DOCUMENT NUMBER: 74268985 PubMed ID: 4792296
TITLE: Adsorption of polyadenylate and other polynucleotides to unmodified cellulose.
AUTHOR: Kitos P A; Amos H
SOURCE: BIOCHEMISTRY, (1973 Dec 4) 12 (25) 5086-91.
Journal code: A0G; 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197409
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19740906

CT *Adenine Nucleotides: IP, isolation & purification
Adsorption
Buffers
*Cellulose
Chromatography
Cytosine Nucleotides
DNA, Single-Stranded
Nucleic Acid Denaturation
Osmolar Concentration
Poly A-U
*Polynucleotides: IP, isolation & purification
Pyrimidine Nucleotides
***RNA: IP, isolation & purification**
Ribonucleotides
Uracil Nucleotides

L378 ANSWER 24 OF 24 MEDLINE
ACCESSION NUMBER: 72228862 MEDLINE
DOCUMENT NUMBER: 72228862 PubMed ID: 4557425
TITLE: A rapid technique for the analytical and preparative isolation of transfer RNA from reaction mixtures.
AUTHOR: Vickers J D; Logan D M
SOURCE: ANALYTICAL BIOCHEMISTRY, (1972 Jul) 48 (1) 45-52. Journal code: 4NK; 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197209
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19720912

CT Check Tags: Animal
Adenosine Triphosphate
Adsorption
Buffers
Cattle
Cellulose
Escherichia coli
Evaluation Studies
Hydrogen-Ion Concentration
Magnesium
Methods
Osmolar Concentration
Phenylalanine
RNA
***RNA, Bacterial: IP, isolation & purification**
***RNA, Transfer: IP, isolation & purification**
Saccharomyces
Serum Albumin, Bovine
Sodium Chloride
Temperature
Time Factors
Tritium

Supplemental Search for "ECTHAM Cellulose"

#47

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

```
=> file medline
FILE 'MEDLINE' ENTERED AT 18:34:11 ON 04 JUN 2002

 FILE LAST UPDATED: 4 JUN 2002 (20020604/UP). FILE COVERS 1958 TO DATE.

 On April 22, 2001, MEDLINE was reloaded. See HELP RLOAD for details.

 MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details.

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 frequency (EVERYUPDATE) is available. See HELP UPDATE for more information.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

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 Enter HELP CONTENT for details.

 Left, right, and simultaneous left and right truncation are available in the
 Basic Index. See HELP SFIELDS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
 SUBSTANCE IDENTIFICATION.

=> d que L11
L6             2 SEA FILE=MEDLINE ABB=ON  PLU=ON  (ECTHAM-CELLULOSE)/CN
L7             8 SEA FILE=MEDLINE ABB=ON  PLU=ON  (ECTHAM-CELLULOSE)/TI
L11            8 SEA FILE=MEDLINE ABB=ON  PLU=ON  L6 OR L7


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FILE LAST UPDATED: 2 Jun 2002  (20020602/ED)

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=> d que L3
```

L3 9 SEA FILE=CAPLUS ABB=ON PLU=ON (ECTHAM (L) CELLULOSE)/OBI

=> dup rem L11 L3
FILE 'MEDLINE' ENTERED AT 18:35:53 ON 04 JUN 2002

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PROCESSING COMPLETED FOR L11
PROCESSING COMPLETED FOR L3
L12 11 DUP REM L11 L3 (6 DUPLICATES REMOVED)

=> d ibib ab ct 1-11

L12 ANSWER 1 OF 11 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 82257445 MEDLINE
DOCUMENT NUMBER: 82257445 PubMed ID: 7104353
TITLE: Fractionation of chromatin, released by nuclease digestion, on **ECTHAM-cellulose**. Separation of active and inactive chromatin.
AUTHOR: Smith A J; Billett M A
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA, (1982 May 31) 697 (2) 134-47.
Journal code: A0W; 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198210
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19970203
Entered Medline: 19821021

AB Chromatin released by two nucleases under various ionic conditions has been fractionated by chromatography on ECTHAM-cellulose. Mg2+ -soluble chromatin, which according to Gottesfeld and Partington is enriched in transcribed DNA sequences (Gottesfeld, J.M. and Partington, G.A., (1977) Cell 12, 953-962) and produced by DNAase II digestion at intermediate ionic strength, comprises material eluting from ECTHAM-cellulose at 80-100 mM Cl-, pH 6.8-7.0, whereas bulk, Mg2+ -insoluble chromatin comprises more tightly binding material. Free hnRNP particles elute at 30 mM Cl-, pH 6.8. Oligonucleosomes, which according to Dimitriadis and Tata are enriched in transcribed sequences (Dimitriadis, G.J. and Tata, J.R. (1980) Biochem. J. 187, 467-477) and produced by micrococcal nuclease digestion at physiological ionic strength, also elute predominantly at 80-100 mM Cl-, pH 6.8-7.0. When liver nuclei are digested with micrococcal nuclease at low ionic strength, the most rapidly released chromatin is enriched in nascent RNA and hnRNP particles, and binds weakly to ECTHAM-cellulose. More slowly solubilised chromatin, containing fewer hnRNP particles, binds much more strongly to ECTHAM-cellulose. In confirmation of results with mechanically sheared chromatin, the affinity of particular chromatin fractions is not dependent on the size of chromatin particles, rather it reflects the differing composition, and in particular the non-histone protein and hnRNP content, which, we propose, determines the conformation adopted by different chromatin fractions in the cation conditions used for elution from ECTHAM-cellulose.

CT Check Tags: Animal; Support, Non-U.S. Gov't
Cellulose: AA, analogs & derivatives
*Chromatin: AN, analysis

Chromatography, Ion Exchange: MT, methods
*DNA: IP, isolation & purification
Histones: IP, isolation & purification
*Liver: AN, analysis
Magnesium
*Micrococcal Nuclease: ME, metabolism
Molecular Weight
*Nucleoproteins: IP, isolation & purification
Nucleosomes: UL, ultrastructure
Osmolar Concentration
Rats
Tromethamine: AA, analogs & derivatives

L12 ANSWER 2 OF 11 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 82257444 MEDLINE
DOCUMENT NUMBER: 82257444 PubMed ID: 6213267
TITLE: Fractionation of mechanically sheared chromatin on **ECTHAM-cellulose**.
AUTHOR: Smith A J; Billett M A
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA, (1982 May 31) 697 (2) 121-33.
Journal code: A0W; 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198210
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19821021

AB Chromatography of chromatin on the weak ion-exchange resin ECTHAM-cellulose was re-examined using the combined salt-pH elution conditions of Stratling, W.H., Van, N.T. and O'Malley, B.W. (1976) Eur. J. Biochem. 66, 423-433. When mechanically sheared rat liver chromatin was chromatographed on ECTHAM-cellulose the histone composition of eluted fractions was very similar, whereas early eluting fractions were enriched in non-histone proteins, including certain high mobility group proteins, and in hnRNP particles, containing newly synthesised RNA. Later eluting fractions were depleted in all of these components. The majority of hnRNP particles in early eluting chromatin were shown to be physically associated with chromatin by centrifugation in metrizamide. Hen erythrocyte chromatin contained no early eluting material. Size of DNA fragments was not a significant factor in determining the elution position of chromatin fragments. Early eluting material was not generated by endogenous nuclease and protease action. The conditions of chromatin preparation, and of elution of early chromatin fractions caused no gross disruption of chromatin structure, or dissociation of chromatin proteins, although some nucleosome sliding may have occurred. The conditions required for elution of some of the later fractions are sufficient to cause dissociation of protein, and alteration of chromatin conformation.

CT Check Tags: Animal; Male; Support, Non-U.S. Gov't
Cell Nucleus: AN, analysis
Cellulose: AA, analogs & derivatives
*Chromatin: AN, analysis
Chromatography, Ion Exchange: MT, methods
*Chromosomal Proteins, Non-Histone: IP, isolation & purification
High Mobility Group Proteins
*Histones: IP, isolation & purification
*Liver: AN, analysis
Molecular Weight

Rats
Rats, Inbred Strains
Tromethamine: AA, analogs & derivatives

L12 ANSWER 3 OF 11 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 79149053 MEDLINE
DOCUMENT NUMBER: 79149053 PubMed ID: 428655
TITLE: Fractionation of chromatin by chromatography on **ECTHAM cellulose** [proceedings].
AUTHOR: Smith A J; Billett M A
SOURCE: BIOCHEMICAL SOCIETY TRANSACTIONS, (1979 Apr) 7 (2) 379-80. Journal code: E48; 7506897. ISSN: 0300-5127.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197906
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19790626
CT Check Tags: Animal
Cell Nucleus: AN, analysis
*Chromatin: AN, analysis
Chromatography, Ion Exchange: MT, methods
DNA: IP, isolation & purification
Liver: AN, analysis
Nucleoproteins: IP, isolation & purification
RNA: IP, isolation & purification
Rats

L12 ANSWER 4 OF 11 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 77232119 MEDLINE
DOCUMENT NUMBER: 77232119 PubMed ID: 886991
TITLE: Chromatin fractionation by chromatography on **ECTHAM -cellulose**.
AUTHOR: Simpson R T
SOURCE: METHODS IN CELL BIOLOGY, (1977) 16 437-46. Journal code: MV4; 0373334. ISSN: 0091-679X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197709
ENTRY DATE: Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19770922
CT Check Tags: Animal
Cell Nucleus: AN, analysis
*Chromatin: AN, analysis
*Chromatography, Ion Exchange: MT, methods
Heat
Protein Denaturation

L12 ANSWER 5 OF 11 MEDLINE
ACCESSION NUMBER: 76257272 MEDLINE
DOCUMENT NUMBER: 76257272 PubMed ID: 182491
TITLE: Studies on the structure and function of chick-oviduct chromatin. 2. Biochemical characterization of two chromatin fractions isolated by **ECTHAM-cellulose** chromatography.

AUTHOR: Stratling W H; O'Malley B W
SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (1976 Jul 15) 66 (3) 435-41.
Journal code: EMZ; 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197611
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19980206
Entered Medline: 19761101

AB Chromatin prepared at various stages of hormone-mediated development of the chick oviduct was investigated for the relative proportions of transcriptionally active (fraction I) and repressed (fraction II) fractions by ECTHAM-cellulose chromatography. During primary stimulation with estrogen, the amount of chromatin DNA in fraction I plotted as a function of time of stimulation showed a bell-shaped profile, similar to the profile obtained earlier for the number of chromatin sites available to RNA polymerase for initiation of RNA synthesis. Chromatin form a transcriptionally inactive system, hen erythrocytes, eluted mainly (98%) as fraction II. The transcriptionally active fraction I of estrogen-stimulated oviduct contained a 4-fold greater RNA polymerase II activity than was found in fraction II. This could be explained by a differential inhibition of RNA polymerase activity in fraction II since enzyme preparations extracted and purified from both chromatin fractions showed equal activities. In support of this finding, fraction I eluted from ECTHAM-cellulose showed a 4-fold greater concentration of rifampicin-resistant RNA chain initiation sites as compared to fraction II. When chromatin from oviduct mince incubated with labeled progesterone and 17 beta-estradiol and was chromatographed on ECTHAM-cellulose, the transcriptionally active fraction also contained a 4-fold greater concentration of bound hormone (per weight DNA) as compared to the repressed fraction.

CT Check Tags: Animal; Female; Support, U.S. Gov't, P.H.S.
Binding Sites
*Chickens: ME, metabolism
*Chromatin: ME, metabolism
*DNA: ME, metabolism
DNA-Directed RNA Polymerase: ME, metabolism
Diethylstilbestrol: AA, analogs & derivatives
Diethylstilbestrol: PD, pharmacology
Erythrocytes
Estradiol: ME, metabolism
Heterochromatin
*Oviducts
Oviducts: DE, drug effects
Oviducts: ME, metabolism
Progesterone: ME, metabolism
Receptors, Cell Surface
*Transcription, Genetic

L12 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1976:490600 CAPLUS
DOCUMENT NUMBER: 85:90600
TITLE: Studies on the structure and function of chick-oviduct chromatin. 2. Biochemical characterization of two chromatin fractions isolated by **ECTHAM-cellulose** chromatography
AUTHOR(S): Straetling, Wolf H.; O'Malley, Bert W.

CORPORATE SOURCE: Dep. Cell Biol., Baylor Coll. Med., Houston, Tex., USA
SOURCE: Eur. J. Biochem. (1976), 66(3), 435-41
CODEN: EJBCAI
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Chromatin prepd. at various stages of hormone-mediated development of the chick oviduct was investigated for the relative proportions of transcriptionally active (fraction I) and repressed (fraction II) fractions by ECTHAM-cellulose chromatog. During primary stimulation with estrogen, the amt. of chromatin DNA in fraction I plotted as a function of time of stimulation showed a bell-shaped profile, similar to the profile obtained earlier for the no. of chromatin sites available to RNA polymerase for initiation of RNA synthesis. Chromatin from a transcriptionally inactive system, hen erythrocytes, eluted mainly (98%) as fraction II. The transcriptionally active fraction I of estrogen-stimulated oviduct contained a 4-fold greater RNA polymerase II activity than did fraction II. This was explained by a differential inhibition of RNA polymerase activity in fraction II since enzyme prepns. extd. and purified from both chromatin fractions showed equal activities. In support of this finding, fraction I eluted from ECTHAM-cellulose showed a 4-fold greater concn. of rifampicin-resistant RNA chain initiation sites as compared to fraction II. When chromatin from oviduct mince was incubated with labeled progesterone and 17.beta.-estradiol and was chromatographed on ECTHAM-cellulose, the transcriptionally active fraction also contained a 4-fold greater concn. of bound hormone (per wt. DNA) as compared to the repressed fraction.

CT Development
CT Chicken
CT Oviduct
CT Chromatin
CT Deoxyribonucleic acids

L12 ANSWER 7 OF 11 MEDLINE
ACCESSION NUMBER: 76257271 MEDLINE
DOCUMENT NUMBER: 76257271 PubMed ID: 954749
TITLE: Studies on the structure and function of chick-oviduct chromatin. 1. Fractionation by **ECTHAM-cellulose** chromatography and physico-chemical characterization.
AUTHOR: Stratling W H; Van N T; O'Malley B W
SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (1976 Jul 15) 66 (3) 423-33.
Journal code: EMZ; 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197611
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19761101

AB Chick oviduct chromatin was separated into a ribonucleoprotein fraction and two chromatin fractions (early and late eluting). We utilized a gentle procedure in which moderately hydrated chromatin was subjected to chromatography on a weak ionic-exchange resin (ECTHAM-cellulose) eluted with a combined pH-salt gradient. Chemical analysis of the early (fraction I) and late (fraction II) eluting fractions revealed that their histones were identical and their nonhistone proteins were markedly different. Control experiments showed that these differences were not due to protein rearrangements during chromatin preparation and/or fractionation. The

physical properties of fraction I and II differed in certain aspects. The aggregation response of fraction I to increasing concentrations of monovalent cations was five times lower than that of fraction II but the aggregation response to divalent cations was identical. Thermal denaturation assays of DNAs isolated from fractions I and II revealed identical derivative profiles of hyperchromicity vs temperature, thereby indicating similar base composition in the two fractions. Circular dichroism, spectra of the purified DNAs isolated from both fractions showed identical B-type conformations. However, DNA renaturation kinetics analyzed by computer technique indicated that fraction I DNA contained less than half the amount of highly repetitive sequences as compared to either unfractionated chromatin or fraction II. Circular dichroism spectra of fraction I and II chromatins (at room temperature) showed significant differences in a wavelength region were only DNA is optically active (i.e. 255-320 nm). These results indicated that the DNA complexed to proteins in fraction II assumed a more C-type conformation than the DNA in fraction I. The differences in the circular dichroism spectra could not be accounted for by differences in the RNAs or protein chromophores contained in fraction I and fraction II. When the circular dichroism spectra of fraction I and II were recorded at 55 degrees C, the differences between the two fractions were abolished. These results were interpreted to mean that the differences in the DNA conformations found in fractions I and II were due to the differences in their nonhistone proteins. These proteins were effective in maintaining DNA conformation differences only when they were in their native form but not when heated to 55 degree C. Comparison of the sedimentation coefficients of fractions I and II with their calculated molecular weights suggested a more extended structure in fraction I as compared to a more compact structure in fraction II. Only small differences were observed between fraction I and fraction II with respect to either buoyant density analysis in a metrizamide gradient or in the number of phosphate charges accessible to polylysine.

CT Check Tags: Animal; Female; Support, U.S. Gov't, P.H.S.
Cell Fractionation
Cell Nucleus: AN, analysis
Chemistry
Chickens
*Chromatin: IP, isolation & purification
Chromatography, Ion Exchange
DNA, Satellite: AN, analysis
Heat
Histones: AN, analysis
Nucleic Acid Denaturation
*Oviducts: AN, analysis
Ribonucleoproteins: IP, isolation & purification

L12 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1976:490614 CAPLUS
DOCUMENT NUMBER: 85:90614
TITLE: Studies on the structure and function of chick-oviduct chromatin. 1. Fractionation by **ECTHAM-cellulose** chromatography and physico-chemical characterization
AUTHOR(S): Straetling, Wolf H.; Nguyen Thuong Van; O'Malley, Bert W.
CORPORATE SOURCE: Dep. Cell Biol., Baylor Coll. Med., Houston, Tex., USA
SOURCE: Eur. J. Biochem. (1976), 66(3), 423-33
CODEN: EJBCAI
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chick oviduct chromatin was sepd. into a ribonucleoprotein fraction and 2

chromatin fractions (early- and late-eluting). A gentle procedure was used in which moderately hydrated chromatin was subjected to chromatog. on a weak ionic-exchange resin (ECTHAM-cellulose) eluted with a combined pH-salt gradient. Chem. anal. of the early (fraction I) and late (fraction II)-eluting fractions revealed that their histones were identical and their nonhistone proteins were markedly different. Control expts. showed that these differences were not due to protein rearrangements during chromatin prepn. and (or) fractionation. The phys. properties of fraction I and II differed in certain aspects. The aggregation response of fraction I to increasing concns. of monovalent cations was 5 times lower than that of fraction II but the aggregation response to divalent cations was identical. Thermal denaturation assays of DNAs isolated from fractions I and II revealed identical deriv. profiles of hyperchromicity vs. temp., thereby indicating similar base compn. in the 2 fractions. CD spectra of the purified DNAs isolated from both fractions showed identical B-type conformations. However, DNA renaturation kinetics analyzed by computer technique indicated that fraction I DNA contained less than half the amt. of highly repetitive sequences as compared to either nonfractionated chromatin or fraction II. CD spectra of fraction I and II chromatins (at room temp.) showed significant differences in a wavelength region where only DNA is optically active (i.e. 255-320 nm). These results indicated that the DNA complexed to proteins in fraction II assumed a more C-type conformation than the DNA in fraction I. The differences in the CD spectra are not accounted for by differences in the RNAs or protein chromophores contained in fraction I and fraction II. When the CD spectra of fraction I and II were recorded at 55.degree., the differences between the 2 fractions were abolished. These results were interpreted to mean that the differences in the DNA conformations in fractions I and II are due to the differences in their nonhistone proteins. These proteins are effective in maintaining DNA conformation differences only when they are in their native form, not when heated to 55.degree.. Comparison of the sedimentation coeffs. of fractions I and II with their calcd. mol. wts. suggested a more extended structure in fraction I as compared to a more compact structure in fraction II. Only small differences were obsd. between fraction I and fraction II with respect to either buoyant d. anal. or in the no. of phosphate charges accessible to polylysine.

CT Chains, chemical
CT Proteins
CT Deoxyribonucleic acids
CT Chromatin

L12 ANSWER 9 OF 11 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 75205079 MEDLINE
DOCUMENT NUMBER: 75205079 PubMed ID: 1148007
TITLE: Distribution of satellite DNA in mouse liver chromatin fractionated by **ECTHAM-cellulose** chromatography.
AUTHOR: Simpson R T
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1975 Jul 22) 65 (2) 552-8.
Journal code: 9Y8; 0372516. ISSN: 0006-291X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197510
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19751010

Searched by Thom Larson, STIC, 308-7309

CT Check Tags: Animal; Male
Centrifugation, Density Gradient
*Chromatin: AN, analysis
Chromatography, Ion Exchange
*DNA: AN, analysis
*DNA, Satellite: AN, analysis
DNA, Satellite: IP, isolation & purification
*Liver: AN, analysis
Mice
Mice, Inbred BALB C
Molecular Weight
Sonication

L12 ANSWER 10 OF 11 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 75075138 MEDLINE
DOCUMENT NUMBER: 75075138 PubMed ID: 4442419
TITLE: The distribution of histones and nonhistone proteins in the **ECTHAM-cellulose** fractions of chromatin from several tissues.
AUTHOR: Reeck G R; Simpson R T; Sober H A
SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (1974 Nov 15) 49 (2) 407-14.
Journal code: EMZ; 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197504
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19750423

CT Check Tags: Animal
Brain Chemistry
Cattle
*Chromatin: AN, analysis
Chromatography, Ion Exchange
Ducks
Erythrocytes: AN, analysis
Hela Cells: AN, analysis
*Histones: AN, analysis
Kidney: AN, analysis
Liver: AN, analysis
*Nucleoproteins: AN, analysis
Rabbits
Species Specificity

L12 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1973:54930 CAPLUS
DOCUMENT NUMBER: 78:54930
TITLE: RNA fractionation on modified **celluloses**. I. ECTEOLA-, **ECTHAM**-, aminoethyl-, nucleic acid-, and nitrocellulose
AUTHOR(S): Kothari, R. M.; Taylor, Milton W.
CORPORATE SOURCE: Dep. Microbiol., Indiana Univ., Bloomington, Indiana, USA
SOURCE: J. Chromatogr. (1972), 73(2), 449-62
CODEN: JOCRAM
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 103 refs. An evaluation of the various forms of celluloses

is included.
CT Ribonucleic acids
CT Chromatography, column and liquid

Sandak 09/736,632 ●vidence that EETHAM-cellulose is ~~comprises~~ a solid phase comprising TRIS

=> d 1-4 Ibib it

L13 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1982:558962 CAPLUS
DOCUMENT NUMBER: 97:158962
TITLE: Fractionation of chromatin, released by nuclease digestion, on **ECTHAM-cellulose**. Separation of active and inactive chromatin
AUTHOR(S): Smith, Anthony J.; Billett, Michael A.
CORPORATE SOURCE: Med. Sch., Univ. Nottingham, Nottingham, NG7 2UH, UK
SOURCE: Biochim. Biophys. Acta (1982), 697(2), 134-47
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English
IT Liver, composition
(chromatin of, chromatog. of, on **ECTHAM-cellulose**, nuclease digestion in relation to)
IT Chromatin
(chromatog. of, of liver after nuclease digestion on **ECTHAM-cellulose**)
IT Nucleosome
(chromatog. of, of nuclease-digested chromatin on **ECTHAM-cellulose**)
IT Histones
RL: ANT (Analyte); ANST (Analytical study)
(chromatog. of, of nuclease-digested chromatin on **ECTHAM-cellulose**)
IT Ribonucleoproteins
RL: ANT (Analyte); ANST (Analytical study)
(heterogeneous nuclear RNA-contg., chromatog. of, of nuclease-digested chromatin on **ECTHAM-cellulose**)
IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(nonhistone, chromatog. of, of nuclease-digested chromatin on **ECTHAM-cellulose**)
IT 9004-34-6D, Reaction product with epichlorohydrin and **Tris**,
RL: ANST (Analytical study)
(as stationary phase, for chromatin fractionation)
IT 9013-53-0 9025-64-3
RL: ANST (Analytical study)
(chromatin of liver digestion by, chromatog. on **ECTHAM-cellulose** in relation to)

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1982:451994 CAPLUS
DOCUMENT NUMBER: 97:51994
TITLE: Fractionation of mechanically sheared chromatin on **ECTHAM-cellulose**
AUTHOR(S): Smith, Anthony J.; Billett, Michael A.
CORPORATE SOURCE: Med. Sch., Univ. Nottingham, Nottingham, NG7 2UH, UK
SOURCE: Biochim. Biophys. Acta (1982), 697(2), 121-33
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English
IT Erythrocyte
Liver, composition
(chromatin of, chromatog. of, on **ECTHAM-cellulose**, mech. shearing in relation to)
IT Chromatin
(chromatog. of mech. sheared, on **ECTHAM-cellulose**)
IT Histones
RL: ANT (Analyte); ANST (Analytical study)
(chromatog. of, of mech. sheared chromatin on **ECTHAM-cellulose**)
IT Nucleosome

(structure of, chromatin fractionation on **ECTHAM-cellulose** in relation to)

IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(HMG, chromatog. of, of mech. sheared chromatin on **ECTHAM-cellulose**)

IT Ribonucleoproteins
RL: ANT (Analyte); ANST (Analytical study)
(heterogeneous nuclear RNA-contg., chromatog. of, of mech. sheared chromatin on **ECTHAM-cellulose**)

IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(nonhistone, chromatog. of, of mech. sheared chromatin on **ECTHAM-cellulose**)

IT 9004-34-6D, reaction products with epichlorohydrin and **Tris**-HCl
RL: ANST (Analytical study)
(as stationary phase, for chromatin fractionation)

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1975:509920 CAPLUS
DOCUMENT NUMBER: 83:109920
TITLE: Distribution of satellite DNA in mouse liver chromatin fractionated by **ECTHAM** [epichlorohydrin-**tris**(hydroxymethyl)aminomethane]-**cellulose** chromatography
AUTHOR(S): Simpson, Robert T.
CORPORATE SOURCE: Natl. Inst. Arthritis, Metab. Dig. Dis., Natl. Inst. Health, Bethesda, Md., USA
SOURCE: Biochem. Biophys. Res. Commun. (1975), 65(2), 552-8
CODEN: BBRCA9
DOCUMENT TYPE: Journal
LANGUAGE: English

IT Liver, composition
(satellite DNA distribution in chromatin of)

IT Chromatin
(satellite DNA distribution in, of liver)

IT Deoxyribonucleic acids
RL: BIOL (Biological study)
(satellite, distribution in liver chromatin)

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1975:81913 CAPLUS
DOCUMENT NUMBER: 82:81913
TITLE: Distribution of histones and nonhistone proteins in the **ECTHAM** (epichlorohydrin-**tris**(hydroxymethyl)aminomethane)-**cellulose** fractions of chromatin from several tissues
AUTHOR(S): Reeck, Gerald R.; Simpson, Robert T.; Sober, Herbert A.
CORPORATE SOURCE: Sect. Dev. Biochem., Natl. Inst. Arthritis, Metab. Dig. Dis., Bethesda, Md., USA
SOURCE: Eur. J. Biochem. (1974), 49(2), 407-14
CODEN: EJBCAI
DOCUMENT TYPE: Journal
LANGUAGE: English

IT Brain, composition
Erythrocyte
HeLa cell
Kidney, composition
Liver, composition
(chromatin of, histone and nonhistone proteins of, chromatog. distribution of)

IT Chromatin
(histone and nonhistone proteins of, chromatog. distribution of)

IT Proteins

RL: BIOL (Biological study)
(nonhistone, of chromatin, chromatog. distribution of histones and)

IT Histones
RL: BIOL (Biological study)
(of chromatin, chromatog. distribution of nonhistone proteins and)

Elected Species Search

W. Sandals; 09/736,632

Aff #7

=> file caplus
FILE 'CAPLUS' ENTERED AT 14:41:00 ON 04 JUN 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

FILE COVERS 1907 - 4 Jun 2002 VOL 136 ISS 23
FILE LAST UPDATED: 2 Jun 2002 (20020602/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d que L9
L1 (173)SEA FILE=CAPLUS ABB=ON PLU=ON 6976-37-0#/RN ← CA Registry #
L2 (965)SEA FILE=CAPLUS ABB=ON PLU=ON BISTRIS OR BIS-TRIS
L3 (1035)SEA FILE=CAPLUS ABB=ON PLU=ON L1 OR L2
L4 (191480)SEA FILE=CAPLUS ABB=ON PLU=ON DNA+PFT/CT PFT = Prefered or forbidden terms
L5 (143502)SEA FILE=CAPLUS ABB=ON PLU=ON RNA+PFT/CT
L6 (36859)SEA FILE=CAPLUS ABB=ON PLU=ON NUCLEIC ACIDS+PFT/CT
L7 (327110)SEA FILE=CAPLUS ABB=ON PLU=ON L4 OR L5 OR L6
L8 (8380)SEA FILE=CAPLUS ABB=ON PLU=ON L7 (L) PREP/RL Prep/RL = Preparation or purification role
L9 3 SEA FILE=CAPLUS ABB=ON PLU=ON L8 AND L3

=> d que L16
L10 (191480)SEA FILE=CAPLUS ABB=ON PLU=ON DNA+PFT/CT
L11 (143502)SEA FILE=CAPLUS ABB=ON PLU=ON RNA+PFT/CT
L12 (36859)SEA FILE=CAPLUS ABB=ON PLU=ON NUCLEIC ACIDS+PFT/CT
L13 (327110)SEA FILE=CAPLUS ABB=ON PLU=ON L10 OR L11 OR L12
L14 (2733)SEA FILE=CAPLUS ABB=ON PLU=ON L13 (L) PUR/RL PUR/RL = purification role
L15 (13)SEA FILE=CAPLUS ABB=ON PLU=ON 6976-37-0D/RN D = derivative of compound represented by Reg #.
L16 1 SEA FILE=CAPLUS ABB=ON PLU=ON L15 AND L14

=> d que L104
L94 (191600)SEA FILE=CAPLUS ABB=ON PLU=ON DNA+PFT/CT
L95 (143522)SEA FILE=CAPLUS ABB=ON PLU=ON RNA+PFT/CT
L96 (36874)SEA FILE=CAPLUS ABB=ON PLU=ON NUCLEIC ACIDS+PFT/CT
L97 (327249)SEA FILE=CAPLUS ABB=ON PLU=ON (L94 OR L95 OR L96)
L98 (32870)SEA FILE=CAPLUS ABB=ON PLU=ON SORBENTS+NT,PFT/CT
L99 (174)SEA FILE=CAPLUS ABB=ON PLU=ON 6976-37-0#/RN
L100(967)SEA FILE=CAPLUS ABB=ON PLU=ON BISTRIS OR BIS-TRIS
L101(1037)SEA FILE=CAPLUS ABB=ON PLU=ON L99 OR L100
L102(8389)SEA FILE=CAPLUS ABB=ON PLU=ON L97 (L) PREP/RL ← didn't mean to highlight this line!

Searched by Thom Larson, STIC, 308-7309

```
L103(        54)SEA FILE=CAPLUS ABB=ON  PLU=ON  L102 AND L98
L104          1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L103 AND L101


=> s L9 OR L16 OR L104
L368          3 L9 OR L16 OR L104

=> File medline
FILE 'MEDLINE' ENTERED AT 14:42:11 ON 04 JUN 2002

 FILE LAST UPDATED: 2 JUN 2002 (20020602/UP). FILE COVERS 1958 TO DATE.

 On April 22, 2001, MEDLINE was reloaded. See HELP RLOAD for details.

 MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details.

 MEDLINE is now updated 4 times per week. A new current-awareness alert
 frequency (EVERYUPDATE) is available. See HELP UPDATE for more information.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

 The OLDMEDLINE file segment now contains data from 1958 through 1965.
 Enter HELP CONTENT for details.

 Left, right, and simultaneous left and right truncation are available in the
 Basic Index. See HELP SFIELDS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
 SUBSTANCE IDENTIFICATION.

=> d que L153
L145(         8)SEA FILE=MEDLINE ABB=ON  PLU=ON  6976-37-0##
L146(       154)SEA FILE=MEDLINE ABB=ON  PLU=ON  BISTRIS OR BIS-TRIS
L147(       154)SEA FILE=MEDLINE ABB=ON  PLU=ON  L145 OR L146
L148(    504740)SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L149(    431701)SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L150(    285547)SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L151(    649056)SEA FILE=MEDLINE ABB=ON  PLU=ON  L148 OR L149 OR L150
L152(     39157)SEA FILE=MEDLINE ABB=ON  PLU=ON  L151 (L) IP/CT
L153          0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L152 AND L147


=> d que L162
L154(    504740)SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L155(    431701)SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L156(    285547)SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L157(    649056)SEA FILE=MEDLINE ABB=ON  PLU=ON  L154 OR L155 OR L156
L158(     39157)SEA FILE=MEDLINE ABB=ON  PLU=ON  L157 (L) IP/CT
L159(     31681)SEA FILE=MEDLINE ABB=ON  PLU=ON  BUFFERS+NT,PFT/CT
L160(       182)SEA FILE=MEDLINE ABB=ON  PLU=ON  L159 AND L158
L161(      2361)SEA FILE=MEDLINE ABB=ON  PLU=ON  ION EXCHANGE+PFT/CT
L162          0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L161 AND L160


=> d que L172
L163(    504740)SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L164(    431701)SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L165(    285547)SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
```

— IP = Isolation and Purification

Bis-Tris maps to MeSH heading buffers — +NT = + narrower terms

```
L166(    649056)SEA FILE=MEDLINE ABB=ON  PLU=ON  L163 OR L164 OR L165
L167(     39157)SEA FILE=MEDLINE ABB=ON  PLU=ON  L166 (L) IP/CT
L168(      9057)SEA FILE=MEDLINE ABB=ON  PLU=ON  L167/MAJ
L169(     31681)SEA FILE=MEDLINE ABB=ON  PLU=ON  BUFFERS+NT,PFT/CT
L170(       114)SEA FILE=MEDLINE ABB=ON  PLU=ON  L169 AND L168
L171(     14227)SEA FILE=MEDLINE ABB=ON  PLU=ON  ADSORPTION+PFT/CT
L172          3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L170 AND L171
```

/Maj = is major focus of document

```
=> d que L181
L173(    504740)SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L174(    431701)SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L175(    285547)SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L176(    649056)SEA FILE=MEDLINE ABB=ON  PLU=ON  L173 OR L174 OR L175
L177(     39157)SEA FILE=MEDLINE ABB=ON  PLU=ON  L176 (L) IP/CT
L178(     31681)SEA FILE=MEDLINE ABB=ON  PLU=ON  BUFFERS+NT,PFT/CT
L179(       182)SEA FILE=MEDLINE ABB=ON  PLU=ON  L178 AND L177
L180(     18659)SEA FILE=MEDLINE ABB=ON  PLU=ON  ABSORPTION+PFT/CT
L181          1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L179 AND L180

=> s L172 or L181
L369          4 L172 OR L181

=> file biosis wpids
FILE 'BIOSIS' ENTERED AT 14:45:59 ON 04 JUN 2002
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FILE 'WPIDS' ENTERED AT 14:45:59 ON 04 JUN 2002
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```

} searched these together using free text instead of controlled vocabulary.

```
=> d que L252
L244(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L245(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L246(     51726)SEA ION EXCHANGE
L247(   1456171)SEA SOLID OR STATIONARY OR MATRIX OR MEDIUM OR MEDIA
L248(    164224)SEA L244 (S) L245
L249(      6225)SEA L246 (S) L247
L250(       205)SEA L248 AND L249
L251(       337)SEA BISTRIS OR BIS (W) TRIS
L252          0 SEA L250 AND L251

=> d que L259
L253(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L254(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L255(    164224)SEA L253 (S) L254
L256(       337)SEA BISTRIS OR BIS (W) TRIS
L257(    376601)SEA ADSORP? OR ABSORP? OR SORB? OR SORP?
L258(        20)SEA L257 (S) L256
L259          1 SEA L258 AND L255

=> d que L264
L260(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L261(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L262(     67611)SEA L260 (5A) L261
```

```
L263(       337)SEA BISTRIS OR BIS (W) TRIS
L264          2 SEA L262 (S) L263


=> s L259 or L264
QUERY PROCESSING INTERRUPTED
The system was temporarily unable to process your query.  If this
message appears repeatedly, please notify the Help Desk.  Enter "HELP
STN" for information on contacting the nearest STN Help Desk by
telephone or via SEND in the STNMAIL file.

=> dup rem L369 L368 L259 L264
FILE 'MEDLINE' ENTERED AT 14:58:18 ON 04 JUN 2002

FILE 'CAPLUS' ENTERED AT 14:58:18 ON 04 JUN 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE 'WPIDS' ENTERED AT 14:58:18 ON 04 JUN 2002
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FILE 'BIOSIS' ENTERED AT 14:58:18 ON 04 JUN 2002
COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC.(R)
PROCESSING COMPLETED FOR L369
PROCESSING COMPLETED FOR L368
PROCESSING COMPLETED FOR L259
PROCESSING COMPLETED FOR L264
COMMAND INTERRUPTED
If this message appears repeatedly, please notify the Help Desk.
Enter "HELP STN" for information on contacting the nearest STN Help
Desk by telephone or via SEND in the STNMAIL file.

=> dup rem L369 L368 L259 L264
PROCESSING COMPLETED FOR L369
PROCESSING COMPLETED FOR L368
PROCESSING COMPLETED FOR L259
PROCESSING COMPLETED FOR L264
L372          10 DUP REM L369 L368 L259 L264 (0 DUPLICATES REMOVED)

=> d ibib ab it 1-10

L372 ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         2001:643430  CAPLUS
DOCUMENT NUMBER:          135:191272
TITLE:                    Isolation of nucleic acids from blood by selective
                          adsorption and desorption using charged surfaces
INVENTOR(S):              Baker, Matthew John
PATENT ASSIGNEE(S):       UK
SOURCE:                   U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U.S.
                          Ser. No. 586,009.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ----------------  ----  --------      ---------------  --------
     US 2001018513      A1   20010830      US 2000-736632   20001214
```

Searched by Thom Larson, STIC, 308-7309

Got this error message several times for some reason using this query

L259 L264 — included both L259 & L264 in "Dup Remove" since the "or" logic query wouldn't run,

!!!

Finally!

Your inventor-related document.

WO 9929703 A2 19990617 WO 1998-GB3602 19981204
WO 9929703 A3 19990826
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: GB 1997-25839 A 19971206
GB 1998-15541 A 19980717
WO 1998-GBB3602 W 19981204
US 2000-586009 A2 20000602

AB A method for extg. nucleic acids from a biol. material such as blood comprises contacting the mixt. with a material at a pH such that the material is pos. charged and will bind neg. charged nucleic acids and then eluting the nucleic acids at a pH when the said materials possess a neutral or neg. charge to release the nucleic acids. The nucleic acids can be removed under mildly alk. conditions to the maintain integrity of the nucleic acids and to allow retrieval of the nucleic acids in reagents that are immediately compatible with either storage or anal. testing. The use of surfaces modified with zwitterionic buffers is demonstrated.

IT Paramagnetic materials
(beads, surface modified; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Buffers
(for control of surface charge of sorbents and nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Ion exchangers
(for purifn. of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Blood analysis
Sorbents
(isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT **DNA**
Nucleic acids
RNA
RL: **PUR (Purification or recovery); PREP (Preparation)**
(isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Peptides, uses
RL: DEV (Device component use); USES (Uses)
(oligopeptides, derivs.; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Amines, uses
RL: DEV (Device component use); USES (Uses)
(polyhydroxylated; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT **DNA**
RL: **PUR (Purification or recovery); PREP (Preparation)**
(single-stranded; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Glass, uses
RL: DEV (Device component use); USES (Uses)
(surface-modified, for capture and release of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Carboxyl group
(surfaces modified with, for capture and release of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT 33529-02-1, 1-Decylimidazole
RL: MOA (Modifier or additive use); USES (Uses)
(as detergent in nucleic acid purifn.; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT 65-46-3D, Cytidine, immobilized 71-00-1D, L-Histidine, derivs., immobilized, uses 102-71-6D, Triethanolamine, derivs., immobilized 103-47-9D, CHES, immobilized 124-68-5D, immobilized 150-25-4D, BICINE, immobilized 288-32-4D, Imidazole, derivs., immobilized 556-33-2D, Glycylglycylglycine, derivs., immobilized 556-50-3D, Glycylglycine, derivs., immobilized 1132-61-2D, MOPS, immobilized 1135-40-6D, CAPS, immobilized 1185-53-1D, Tris hydrochloride, immobilized 3416-24-8D, Glucosamine, derivs., immobilized 4432-31-9D, MES, immobilized 5625-37-6D, 1,4-Piperazinediethanesulfonic acid, immobilized 5704-04-1D, Tricine, immobilized 6620-95-7D, L-Serine, N-L-Seryl, derivs., immobilized **6976-37-0D**, **BIS-TRIS**, immobilized 7361-43-5D, L-Serine, N-glycyl, derivs., immobilized 7365-44-8D, TES, immobilized 7365-45-9D, HEPES, immobilized 7365-82-4D, ACES, immobilized 8063-07-8D, Kanamycin, derivs., immobilized 9003-01-4D, Polyacrylic acid, conjugates with zwitterionic buffers 10191-18-1D, BES, immobilized 16052-06-5D, EPPS, immobilized 26062-48-6D, Poly-L-histidine, immobilized 26239-55-4D, ADA, immobilized 26854-81-9D, immobilized 29915-38-6D, TAPS, immobilized 54960-65-5D, immobilized 59247-16-4D, L-Alanine, N-alanyl, derivs., immobilized 64431-96-5D, **Bis-Tris** Propane, immobilized 68189-43-5D, POPSO, immobilized 68399-77-9D, MOPSO, immobilized 68399-78-0D, HEPPSO, immobilized 68399-79-1D, AMPSO, immobilized 68399-80-4D, DIPSO, immobilized 68399-81-5D, TAPSO, immobilized 73463-39-5D, CAPSO, immobilized 115724-21-5D, 4-Morpholinebutanesulfonic acid, immobilized 161308-34-5D, immobilized 161308-36-7D, immobilized
RL: DEV (Device component use); USES (Uses)
(for pH regulated capture and release of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT 1332-37-2, Iron oxide, uses 13463-67-7, Titanium dioxide, uses
RL: DEV (Device component use); USES (Uses)
(magnetic, in polystyrene beads; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT 9003-53-6, polystyrene 9012-76-4, chitosan
RL: DEV (Device component use); USES (Uses)
(surface-modified, for capture and release of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

L372 ANSWER 2 OF 10 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-355165 [37] WPIDS
DOC. NO. CPI: C2001-109987
TITLE: Composition useful for prolonging freshness or aesthetic appearance of a plant, flower, fruit, or plant cutting, comprises an N-acylethanolamine compound and a horticulturally acceptable vehicle.
DERWENT CLASS: C03 C05 D16
INVENTOR(S): AUSTIN-BROWN, S; CHAPMAN, K D
PATENT ASSIGNEE(S): (UYNT-N) UNIV NORTH TEXAS
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001030143	A2	20010503	(200137)*	EN	120

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001013550 A 20010508 (200149)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001030143	A2	WO 2000-US29959	20001030
AU 2001013550	A	AU 2001-13550	20001030

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001013550	A	Based on	WO 200130143

PRIORITY APPLN. INFO: US 1999-162178P 19991028

AB WO 200130143 A UPAB: 20010704

NOVELTY - A composition (I) comprising a first N-acylethanolamine compound (which prolongs the freshness or the aesthetic appearance of a plant, flower, fruit, or plant cutting) and a horticulturally acceptable vehicle, is new.

DETAILED DESCRIPTION - In (I), the N-acylethanolamine compound is of the formula (F1):

RCONHCH2CH2OH (F1)

R = optionally branched or straight chain, saturated or unsaturated C8-C20 alkyl.

INDEPENDENT CLAIMS are also included for the following:

(1) a kit (II) comprising (I), and instructions for using (II) to delay the senescence of plant, flower, fruit, or plant cutting;

(2) an **isolated polynucleotide** (III) that encodes a polypeptide comprising an at least 11 contiguous amino acids from a sequence (S1) comprising 391 amino acids fully defined in the specification, encodes a polypeptide having plant phospholipase D (PLD) activity and at least about 90% sequence identity with (S1), comprises at least 15 contiguous nucleotides from a sequence (S2) comprising 1173 base pairs fully defined in the specification, or hybridizes to S2, or its complements, under stringent hybridization conditions;

(3) an **isolated polynucleotide** (IV) that comprises a sequence region consisting of at least 15 contiguous nucleotides that have the same sequence as, or are complementary to, at least 15 contiguous nucleotides of S2, or a sequence region of from 200-10000 nucleotides in length that hybridizes to S2, or to its complement, under hybridization conditions comprising a salt concentration of from about 0.04-0.10 M, and a temperature of from about 60-75 deg. C;

(4) an isolated polypeptide (V) encoded by (III) or (IV);

(5) a transgenic plant (VI) comprising a heterologous nucleic acid segment that comprises (III) or (IV); and

(6) a progeny, seed or plant (VII) grown from the seed of any generation of (VI).

USE - (I) Or a solution comprising the N-acylethanolamine compound is useful for delaying the senescence of a plant (selected from roses,

orchids, tulips, daffodils, hyacinths, carnations, chrysanthemums, baby's breath, daisies, gladiolus, agapanthus, anthuria, Protea, Heliconia, Strilitzia, lilies, asters, irises, delphiniums, liatris, lisianthus, statis, stephanotis, freesoa, dendrobiums, sunflowers, snap dragons, and ornamental foliage, preferably coniferous foliage comprising juniper, fir, pine, cedar, or spruce foliage, where the ornamental foliage comprises cut leaves, stalks, stems, branches, limbs, or cut trees, or ornamental Christmas, holiday trees, wreaths, or garlands), flower, fruit, or plant cutting. The plant cutting such as a bulb, bloom, bud, flower, petal, stem, branch, rhizome, bract, needle, or leaf, is severed from plant during or after cultivation of plant (claimed). (V) is useful in the preparation of an antibody that specifically binds to it.

ADVANTAGE - Delaying senescence preserves or improves the appearance, fragrance, freshness, or aesthetic characteristics, reduces the droop, wilt, bloom loss, needle drop, or rate of dehydration, of plant, flower, fruit, or plant cutting, or prolongs or extends the appearance, texture, taste, quality, shelf life, transportability, or storagability of fruit (claimed).

Effects of N-acylethanolamine (NAE) compound on cut flowers was tested. Because NAE inhibited plant phospholipase D (PLD) alpha activity in vitro, and because PLD activity was associated with cellular damage in senescing plant tissues, the effect of NAE-containing solutions was tested as senescence-delaying agents for cut flowers. Several parameters were examined with carnations, steam wilt, and flower cross-sectional width and appearance. For stem wilt, the angle of declination at the second and third nodes from the flower head was measured from photographs taken at 14 days after treatments. Flowers were either dipped in agar, or not, then dipped into water or NAE 12:0. The larger the angle reported, the greater was the wilt or bend of the stem. NAE 12:0 provided extended freshness to carnation stems, by acting to inhibit membrane degradation in the carnation stems.

Dwg.0/10

L372 ANSWER 3 OF 10 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-105079 [09] WPIDS
CROSS REFERENCE: 1998-130837 [12]; 1998-467730 [40]; 2000-671736 [49]
DOC. NO. NON-CPI: N2000-080720
DOC. NO. CPI: C2000-031424
TITLE: Screening for compounds that modulate interactions between RNA binding proteins and RNA molecules.
DERWENT CLASS: A96 B04 D16 J04 S03
INVENTOR(S): BEACH, D L; GIORDANO, T
PATENT ASSIGNEE(S): (MESS-N) MESSAGE PHARM
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6004749	A	19991221	(200009)*		24

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
US 6004749	A	CIP of	US 1996-690010	19960731
			US 1997-903910	19970731

PRIORITY APPLN. INFO: US 1997-903910 19970731; US 1996-690010 19960731

Searched by Thom Larson, STIC, 308-7309

AB US 6004749 A UPAB: 20001219
NOVELTY - A method (X) of screening for compounds that modulate interactions between RNA binding proteins (RBPs) and RNA molecules, is new. (X) uses a single set of reaction conditions (termed 'universal conditions') to detect nearly every interaction between the RNA and RBPs.

DETAILED DESCRIPTION - A method (X) for identifying compounds that modulate the interactions between RNA binding proteins (RBPs) and RNA molecules, which is performed under conditions that permit the detection of interactions between RBPs and each amyloid precursor protein untranslated region, AUUUA and poly(a). (X) comprises:

(1) forming 1 or more test solutions, each of which comprises:

(i) 1 or more different RNA molecules;

(ii) a buffer comprising a monovalent cation, a divalent cation, a reducing agent and a density agent for enhancing gel band quality;

(iii) 1 or more different RBPs; and

(iv) a test compound (the RNA molecules, buffer and RBPs are the same in each test solution within a set and either the RNA molecules and/or the RBPs differ between different test solutions);

(2) forming a control solution for each set of test solutions, each of which (the control solutions) comprises the RNA molecules, buffer and RBPs present in each corresponding set of test solutions;

(3) detecting the interactions between the RBPs and RNA molecules in the test and control solutions; and

(4) identifying compounds as modulating interactions between the RNA molecules and the RBPs if the interactions detected in the control solutions differ from those in the test solutions.

USE - (X) may be used for identifying RBPs that interact with specific RNA molecules of interest (and vice versa), identifying RBPs active in certain cell types and under certain physiological conditions and identifying specific regions of an RNA molecules that interact with RBPs. Screening assays employing the universal conditions are useful for identifying compounds that modulate RNA/RBP interactions of interest.

ADVANTAGE - It has been discovered that a single set of conditions can be used to detect nearly every interaction of RBPs and RNA molecules. Prior to this, it was thought that each specific interaction required separate optimized conditions in order to be detected.

Dwg.0/10

L372 ANSWER 4 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:274707 BIOSIS
DOCUMENT NUMBER: PREV199900274707
TITLE: pK-matched running buffers for gel electrophoresis.
AUTHOR(S): Liu, Qiang; Li, Xuemin; Sommer, Steve S. (1)
CORPORATE SOURCE: (1) Departments of Molecular Genetics and Molecular Diagnosis, City of Hope National Medical Center, 1500 East Duarte Road, Duarte, CA, 91010-3000 USA
SOURCE: Analytical Biochemistry, (May 15, 1999) Vol. 270, No. 1, pp. 112-122.
ISSN: 0003-2697.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Electrophoresis through agarose and polyacrylamide-type gels is the standard method to **separate**, identify, and **purify** **nucleic acids**. Properties of electrophoresis buffers such as pH, ionic strength, and composition affect performance. The buffers in use contain a weak acid or weak base buffered by a compound with a dissimilar pK. Herein, three pK-matched buffers were developed, each containing two effective buffering components: one weak base and one weak acid which have similar pKa at 25degreeC (within 0.3 pK units): (i)

Ethanolamine/Capso, pH 9.6; (ii) triethanolamine/Tricine, pH 7.9; and (iii) **Bis-Tris**/Aces, pH 6.7. On agarose gels, the buffers in various concentrations were tested for **separation** of double-stranded **DNA** fragments with various DNA markers, agarose gel concentrations, and field strengths. Mobility was inversely proportional to the logarithm of molecular weight. The buffers provided high resolution without smearing at more dilute concentration than is possible with standard TAE (Tris/acetate, pH 8.0) or TBE (Tris/borate, pH 8.3) buffers. The buffers were also tested in 7 M urea denaturing LongRanger sequencing gels and in nondenaturing polyacrylamide SSCP gels. The pK-matched buffers provide good separation and high resolution, at a broad range of potential pH values. In comparison to TAE and TBE, pK-matched buffers provide higher voltage and current stability, lower working concentration, more concentrated stock solutions (up to 200X), and lower current per unit voltage, resulting in less heat generation.

IT Major Concepts
Methods and Techniques; Molecular Genetics (Biochemistry and Molecular Biophysics)

IT Chemicals & Biochemicals
double-stranded DNA fragments: separation; pK-matched running buffers: uses; DNA: sequencing

IT Methods & Equipment
agarose gel electrophoresis: gel electrophoresis, separation method, purification method; autoradiography: analytical method, imaging method, detection/labeling techniques; electrophoresis: analytical method, electrophoretic techniques, purification method; Bio-Rad Sequi-Gen GT sequencing cell: Bio-Rad, uses, equipment; DNA sequencing: Recombinant DNA Technology, analytical method, sequencing techniques; PCR [polymerase chain reaction]: DNA amplification, sequencing techniques, molecular genetic method, in-situ recombinant gene expression detection

IT Miscellaneous Descriptors
exons; transcription

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
human (Hominidae)

ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates

RN 9012-36-6 (AGAROSE)

L372 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:653522 CAPLUS
DOCUMENT NUMBER: 129:272673
TITLE: Electrophoresis system for the purification, concentration and size fractionation of nucleic acids
INVENTOR(S): Hinton, Stephen M.
PATENT ASSIGNEE(S): Exxon Research and Engineering Company, USA
SOURCE: U.S., 5 pp., Cont. of U.S. Ser. No. 698,618, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5817225	A	19981006	US 1997-968836	19971010
PRIORITY APPLN. INFO.:			US 1996-698618	19960816

AB The present invention is an electrophoretic unit for the purifn., concn., and size fractionation of nucleic acids contaminated by org. acids, such as humic acids. The electrophoretic unit includes a counter ion, bis(2-hydroxyethyl)imino-tris(hydroxymethyl)methane (**BisTris**), and an electrolyte 2-(N-morpholino)ethanesulfonic acid (MES).

IT Electrophoresis
(electrophoresis system for the purifn., concn. and size fractionation of nucleic acids)

IT **Nucleic acids**
RL: PUR (Purification or recovery); **PREP (Preparation)**
(electrophoresis system for the purifn., concn. and size fractionation of nucleic acids)

IT Humic acids
RL: REM (Removal or disposal); PROC (Process)
(electrophoresis system for the purifn., concn. and size fractionation of nucleic acids)

IT Acids, processes
RL: REM (Removal or disposal); PROC (Process)
(org.; electrophoresis system for the purifn., concn. and size fractionation of nucleic acids)

IT 71-50-1, Acetate, analysis 150-25-4, BICINE 4432-31-9, MES 4463-44-9, Xylene cyanol FF **6976-37-0**, **BisTris**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(electrophoresis system for the purifn., concn. and size fractionation of nucleic acids)

L372 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:720256 CAPLUS
DOCUMENT NUMBER: 127:304091
TITLE: High resolution fast electrophoresis system for DNA separation
INVENTOR(S): Buzas, Zsuzsanna
PATENT ASSIGNEE(S): Mezoegazdasagi Biotechnologiai Kutatokoezpont, Hung.
SOURCE: Hung. Teljes, 10 pp.
CODEN: HUXXBU
DOCUMENT TYPE: Patent
LANGUAGE: Hungarian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 75747	A2	19970528	HU 1994-3382	19941125

AB The title system uses polyacrylamide gel, prepd. with ammonium persulfate and tetra-Me ethylenediamine catalyst, and a sulfate-bicine multiphase buffer system. The cathodic buffer is bicine/NaOH, the concg. buffer **bistris**/H2SO4, and the sepg. and anodic buffer tris/H2SO4.

IT Polyacrylamide gel electrophoresis
(high-resoln. fast electrophoresis system for DNA sepn.)

IT **DNA**
RL: PUR (Purification or recovery); **PREP (Preparation)**
(high-resoln. fast electrophoresis system for DNA sepn.)

L372 ANSWER 7 OF 10 MEDLINE
ACCESSION NUMBER: 87109660 MEDLINE
DOCUMENT NUMBER: 87109660 PubMed ID: 2433301
TITLE: Interaction of DNA with hydroxyapatite. Studies on the effect of the phosphate concentration of the column equilibration and washing buffer.
AUTHOR: Obi F O

SOURCE: JOURNAL OF CHROMATOGRAPHY, (1986 Nov 21) 369 (2) 321-6.
Journal code: HQF; 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198703
ENTRY DATE: Entered STN: 19900303
Last Updated on STN: 19900303
Entered Medline: 19870305

AB The ability of hydroxyapatite to bind DNA effectively in phosphate solutions used for column equilibration, sample loading and column washing has been examined. It was demonstrated that substantial amounts of DNA (up to 40%) were eluted in the washing buffer when the phosphate concentration in the lysing solution or urea-phosphate used for column equilibration, sample loading and column washing was 0.24 M. A reduction in the phosphate concentration from 0.24 to 0.15 M in urea-phosphate solution led to almost 100% binding, whereas a similar reduction in the lysing solution did not. A modified method for loading and eluting DNA from hydroxyapatite columns is presented.

L372 ANSWER 8 OF 10 MEDLINE
ACCESSION NUMBER: 74173388 MEDLINE
DOCUMENT NUMBER: 74173388 PubMed ID: 4831352
TITLE: Hydroxylapatite-catalyzed degradation of ribonucleic acid.
AUTHOR: Martinson H G; Wagenaar E B
SOURCE: BIOCHEMISTRY, (1974 Apr 9) 13 (8) 1641-5.
Journal code: A0G; 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197407
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19740726

L372 ANSWER 9 OF 10 MEDLINE
ACCESSION NUMBER: 74268985 MEDLINE
DOCUMENT NUMBER: 74268985 PubMed ID: 4792296
TITLE: Adsorption of polyadenylate and other polynucleotides to unmodified cellulose.
AUTHOR: Kitos P A; Amos H
SOURCE: BIOCHEMISTRY, (1973 Dec 4) 12 (25) 5086-91.
Journal code: A0G; 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197409
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19740906

L372 ANSWER 10 OF 10 MEDLINE
ACCESSION NUMBER: 72228862 MEDLINE
DOCUMENT NUMBER: 72228862 PubMed ID: 4557425
TITLE: A rapid technique for the analytical and preparative isolation of transfer RNA from reaction mixtures.
AUTHOR: Vickers J D; Logan D M

SOURCE: ANALYTICAL BIOCHEMISTRY, (1972 Jul) 48 (1) 45-52.
Journal code: 4NK; 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197209
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19720912

Additional information ("Hit" field) p 14

=> d hit 2 3 7-10 — for documents where it isn't clear why they were hits.

L372 ANSWER 2 OF 10 WPIDS (C) 2002 THOMSON DERWENT

AB WO 200130143 A UPAB: 20010704

NOVELTY - A composition (I) comprising a first N-acylethanolamine compound (which prolongs the freshness or the aesthetic appearance of a plant, flower, fruit, or plant cutting) and a horticulturally acceptable vehicle, is new.

DETAILED DESCRIPTION - In (I), the N-acylethanolamine compound is of the formula (F1):

RCONHCH2CH2OH (F1)

R = optionally branched or straight chain, saturated or unsaturated C8-C20 alkyl.

INDEPENDENT CLAIMS are also included for the following:

(1) a kit (II) comprising (I), and instructions for using (II) to delay the senescence of plant, flower, fruit, or plant cutting;

(2) an **isolated polynucleotide** (III) that encodes a polypeptide comprising an at least 11 contiguous amino acids from a sequence (S1) comprising 391 amino acids fully defined in the specification, encodes a polypeptide having plant phospholipase D (PLD) activity and at least about 90% sequence identity with (S1), comprises at least 15 contiguous nucleotides from a sequence (S2) comprising 1173 base pairs fully defined in the specification, or hybridizes to S2, or its complements, under stringent hybridization conditions;

(3) an **isolated polynucleotide** (IV) that comprises a sequence region consisting of at least 15 contiguous nucleotides that have the same sequence as, or are complementary to, at least 15 contiguous nucleotides of S2, or a sequence region of from 200-10000 nucleotides in length that hybridizes to S2, or to its complement, under hybridization conditions comprising a salt concentration of from about 0.04-0.10 M, and a temperature of from about 60-75 deg. C;

(4) an isolated polypeptide (V) encoded by (III) or (IV);

(5) a transgenic plant (VI) comprising a heterologous nucleic acid segment that comprises (III) or (IV); and

(6) a progeny, seed or plant (VII) grown from the seed of any generation of (VI).

USE - (I) Or a solution comprising the N-acylethanolamine compound is useful for delaying the senescence of a plant (selected from roses, orchids, tulips, daffodils, hyacinths, carnations, chrysanthemums, baby's breath, daisies, gladiolus, agapanthus, anthuria, Protea, Heliconia, Strilitzia, lilies, asters, irises, delphiniums, liatris, lisianthus, statis, stephanotis, freesoa, dendrobiums, sunflowers, snap dragons, and ornamental foliage, preferably coniferous foliage comprising juniper, fir, pine, cedar, or spruce foliage, where the ornamental foliage comprises cut leaves, stalks, stems, branches, limbs, or cut trees, or ornamental Christmas, holiday trees, wreaths, or garlands), flower, fruit, or plant cutting. The plant cutting such as a bulb, bloom, bud, flower, petal, stem, branch, rhizome, bract, needle, or leaf, is severed from plant during or after cultivation of plant (claimed). (V) is useful in the preparation of an antibody that specifically binds to it.

ADVANTAGE - Delaying senescence preserves or improves the appearance, fragrance, freshness, or aesthetic characteristics, reduces the droop, wilt, bloom loss, needle drop, or rate of dehydration, of plant, flower, fruit, or plant cutting, or prolongs or extends the appearance, texture, taste, quality, shelf life, transportability, or storagability of fruit (claimed).

Effects of N-acylethanolamine (NAE) compound on cut flowers was tested. Because NAE inhibited plant phospholipase D (PLD) alpha activity in vitro, and because PLD activity was associated with cellular damage in senescing plant tissues, the effect of NAE-containing solutions was tested as senescence-delaying agents for cut flowers. Several parameters were examined with carnations, steam wilt, and flower cross-sectional width and appearance. For stem wilt, the angle of declination at the second and third nodes from the flower head was measured from photographs taken at 14 days after treatments. Flowers were either dipped in agar, or not, then

dipped into water or NAE 12:0. The larger the angle reported, the greater was the wilt or bend of the stem. NAE 12:0 provided extended freshness to carnation stems, by acting to inhibit membrane degradation in the carnation stems.
Dwg.0/10

TECH UPTX: 20010704
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Composition: (I) Comprises a compound selected from 44 compounds such as NAE 10:0, NAE 11:0, NAE 12:0, and NAE 13:0. (I) Also comprises soy lecithin, Tween-20 (RTM), and a second anti-senescent component selected from a second distinct N-acylethanolamine compound, and an anti-senescent component selected from Petalife (RTM), Oasis (RTM), Rogard (RTM), Everbloom (RTM), FloraLife (RTM), Vita Flora (RTM), Aquaplus (RTM), Spring (RTM) and Crystal Clear (RTM).
The vehicle further comprises a nutrient source for the plant, flower, fruit or plant cutting. The vehicle comprises a lipid, an amino acid, a carbohydrate (such as lactose, dextrose, fructose, sucrose, glucose, **sorbitol**, mannitol or inositol), a surfactant (such as polyoxyethylene **sorbitan** monolaurate, monopalmitate monostearate, ethoxylated alkyl phenols or hydrogenated oil), a buffer (such as acetate, bicarbonate, citrate, succinate, malate, TRIS, MES, HEPES, MOPS, BES, or **BIS-TRIS**), an osmoregulant (such as salt, carbohydrate, polyol, or polyethylene glycol), and a plant hormone (such as auxin, gibberellin or cytokinin).
The vehicle further comprises lecithin, an alcohol such as ethanol or isopropanol, and an antifungal, bacteriostatic or bactericidal agent such as 8-hydroxyquinoline citrate, sodium dichloroisocyanurate, or 1,3-dichloro-5,5-dimethyhydantoin.
Preferred Polynucleotide: (III) Or (IV) is operably linked to a heterologous, plant-expressible promoter. (III) or (IV) is comprised within a vector or a transformed host cell.

L372 ANSWER 3 OF 10 WPIDS (C) 2002 THOMSON DERWENT
TECH UPTX: 20000218
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: In (X), producing the test solutions comprises:
(1) forming a solution of RNA molecules and buffer;
(2) heating the solution to denature the RNA molecules;
(3) cooling the solution;
(4) adding 1 or more different RBPs to the solution; and
(5) adding the test compound to the test solution.
Forming the control solution involves repeating the above process but omitting the test compound from the solution. In (X) several sets of test solutions are assayed. The buffer used has a pH of 8 -10 and is either 5 - 100 mM of HEPES (N-(2-OH-ethyl-)piperazine-N'-(2-ethanesulfonic acid)), Tris and/or **Bis-Tris** propane. The monovalent cation is either K+ (preferred), Na+ and/or NH4+ and is present in a concentration of 50 mM. The divalent cation is either Mg2+, Ca2+ and/or Fe2+ and is present in a concentration of 1 mM. The reducing agent is either dithiothreitol (preferred) and/or beta-mercaptoethanol and is present in a concentration of 0.2 mM. The density agent is either glycerol and/or polyethylene glycol and is present at a concentration of 10% by volume.
In particular, the following solutions may be used:
(1) 7.5 mM **Bis-Tris** Propane with a pH of 8.5 is used as the buffer with 0 - 100 mM of the monovalent ion, 1 mM Mg2+, 0.2 mM dithiothreitol and 10% by volume glycerol;
(2) 7.5 mM **Bis-Tris** Propane with a pH of 8.5 is used as the buffer with 50 mM K+, 0 - 5 mM of divalent ion, 0.2 mM dithiothreitol and 10% by volume glycerol;
(3) 7.5 mM **Bis-Tris** Propane with a pH of 8.5 is used as the buffer with 50 mM K+, 1 mM Mg2+, 0 - 1 mM dithiothreitol and/or beta-mercaptoethanol and 10% by volume glycerol; and/or
(4) 7.5 mM **Bis-Tris** Propane with a pH of 8.5 is used as the buffer with 50 mM K+, 1 mM Mg2+, 0.2 mM dithiothreitol and 1 - 20% by volume glycerol and/or polyethylene glycol.

Specifically, the solution comprises 7.5 mM **Bis-Tris** Propane with a pH of 8.5 as the buffer with 50 mM K+, 1 mM Mg2+, 0.2 mM dithiothreitol and 10% by volume glycerol.
In (X), either the RNA molecules or the RBPs are labeled with a detectable group and detecting interactions between the RBPs and the **RNA** molecules comprises:
(1) **separating** complexes of reacting **RNA** and RBPs from unreacting RNA and RBPs; and
(2) measuring the labeled RNA or RBPs involved in interactions.
The separation of the reacting and unreacting molecules is carried out by gel electrophoresis or filter binding. If filter binding is used, several test solutions and control solutions are separated simultaneously in a single piece of apparatus.
(X) may further comprise analyzing the RNA or RBPs involved in interactions and then comparing those interactions with those observed in the presence or absence of competing RNA molecules.
Preferably, each of the test and control solutions comprise 1 RBP and 1 RNA molecule encoded by a gene of interest.
(X) may further comprise determining if the compounds identified as modulators of RNA/RBP binding also modulate binding in cells. This comprises:
(1) administering the modulator compound to a cell in vitro that expresses the gene of interest;
(2) measuring expression of the gene of interest; and
(3) determining that the identified modulator modifies interactions in the cell if expression in the presence of the compound differs from expression in a cell without the compound.
Finally, (X) may further comprise producing pharmaceutical compositions from the identified modulators.

L372 ANSWER 7 OF 10 MEDLINE
CT Check Tags: Animal
Absorption
Buffers
Cattle
***DNA: IP, isolation & purification**
Durapatite
Hydroxyapatites
Phosphates
Proteins: IP, isolation & purification
RNA: IP, isolation & purification
Thymus Gland: AN, analysis

L372 ANSWER 8 OF 10 MEDLINE
CT **Adsorption**
Buffers
Calcium
Catalysis
Cesium
Chemistry
Chromatography
DNA
Heat
*Hydroxyapatites
Molecular Weight
Nucleic Acid Hybridization
Osmolar Concentration
Phosphates
Plant Viruses
Potassium
Potassium Chloride
RNA: AN, analysis
RNA: IP, isolation & purification
***RNA, Viral: IP, isolation & purification**
Reoviridae

Sodium
Tobacco Mosaic Virus

L372 ANSWER 9 OF 10 MEDLINE
CT *Adenine Nucleotides: IP, isolation & purification
Adsorption
Buffers
*Cellulose
Chromatography
Cytosine Nucleotides
DNA, Single-Stranded
Nucleic Acid Denaturation
Osmolar Concentration
Poly A-U
*Polynucleotides: IP, isolation & purification
Pyrimidine Nucleotides
***RNA: IP, isolation & purification**
Ribonucleotides
Uracil Nucleotides

L372 ANSWER 10 OF 10 MEDLINE
CT Check Tags: Animal
Adenosine Triphosphate
Adsorption
Buffers
Cattle
Cellulose
Escherichia coli
Evaluation Studies
Hydrogen-Ion Concentration
Magnesium
Methods
Osmolar Concentration
Phenylalanine
RNA
***RNA, Bacterial: IP, isolation & purification**
***RNA, Transfer: IP, isolation & purification**
Saccharomyces
Serum Albumin, Bovine
Sodium Chloride
Temperature
Time Factors
Tritium

=> FIL STNGUIDE
FILE 'STNGUIDE' ENTERED AT 15:28:13 ON 04 JUN 2002

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: May 31, 2002 (20020531/UP).

Markush Group Search

#7

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

```
=> FILE CAPLUS
FILE 'CAPLUS' ENTERED AT 16:13:24 ON 04 JUN 2002
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FILE COVERS 1907 - 4 Jun 2002  VOL 136 ISS 23
FILE LAST UPDATED: 2 Jun 2002  (20020602/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> D QUE L127
L113(    191600)SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L114(    143522)SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L115(     36874)SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L116(    327249)SEA FILE=CAPLUS ABB=ON  PLU=ON  (L113 OR L114 OR L115)
L117(     32870)SEA FILE=CAPLUS ABB=ON  PLU=ON  SORBENTS+NT,PFT/CT
L118(      2737)SEA FILE=CAPLUS ABB=ON  PLU=ON  L116 (L) PUR/RL
L119(        20)SEA FILE=REGISTRY ABB=ON  (ACES OR ADA OR AMP OR AMPSO OR BES
                OR BICINE OR (TRIS (W) BIS (W) PROPANE) OR (TRISBIS (W)
                PROPANE) OR CABS OR CAPS OR CAPSO OR CHES OR DIPSO)/CN
L120(     17777)SEA FILE=CAPLUS ABB=ON  L119
L121(        21)SEA FILE=REGISTRY ABB=ON  (EPPS OR HEPBS OR HEPES OR HEPPSO OR
                MES OR MOBS OR MOPS OR MOPSO OR PIPES OR POPSO OR TABS OR TAPS
                OR TAPSO OR TES OR TRICINE OR TRIS)/CN
L122(      6466)SEA FILE=CAPLUS ABB=ON  L121
L123(     37145)SEA FILE=CAPLUS ABB=ON  PLU=ON  (ACES/OBI OR ADA/OBI OR
                AMP/OBI OR AMPSO/OBI OR BES/OBI OR BICINE/OBI OR (TRIS/OBI (W)
                BIS/OBI (W) PROPANE/OBI) OR (TRISBIS/OBI (W) PROPANE/OBI) OR
                CABS/OBI OR CAPS/OBI OR CAPSO/OBI OR CHES/OBI OR DIPSO/OBI)
L124(    100277)SEA FILE=CAPLUS ABB=ON  PLU=ON  (EPPS/OBI OR HEPBS/OBI OR
                HEPES/OBI OR HEPPSO/OBI OR MES/OBI OR MOBS/OBI OR MOPS/OBI OR
                MOPSO/OBI OR PIPES/OBI OR POPSO/OBI OR TABS/OBI OR TAPS/OBI OR
                TAPSO/OBI OR TES/OBI OR TRICINE/OBI OR TRIS/OBI)
L125(    150227)SEA FILE=CAPLUS ABB=ON  PLU=ON  L120 OR L122 OR L123 OR L124
L126(        93)SEA FILE=CAPLUS ABB=ON  PLU=ON  L125 AND L118
L127          4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L126 AND L117


=> D QUE L144
L128(     13669)SEA FILE=CAPLUS ABB=ON  PLU=ON  ION EXCHANGERS+PFT/CT
```

Pur = Purification Role

cross-over search in Registry using chemical name to get the CA Reg # to search CAPLUS

Also search using abreviations for buffers in CAPLUS

```
L129(      2708)SEA FILE=CAPLUS ABB=ON  PLU=ON  ANION EXCHANGE+PFT/CT
L130(    191600)SEA FILE=CAPLUS ABB=ON  PLU=ON  DNA+PFT/CT
L131(    143522)SEA FILE=CAPLUS ABB=ON  PLU=ON  RNA+PFT/CT
L132(     36874)SEA FILE=CAPLUS ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L133(    327249)SEA FILE=CAPLUS ABB=ON  PLU=ON  (L130 OR L131 OR L132)
L134(      2737)SEA FILE=CAPLUS ABB=ON  PLU=ON  L133 (L) PUR/RL
L135(        20)SEA FILE=REGISTRY ABB=ON  (ACES OR ADA OR AMP OR AMPSO OR BES
                  OR BICINE OR (TRIS (W) BIS (W) PROPANE) OR (TRISBIS (W)
                  PROPANE) OR CABS OR CAPS OR CAPSO OR CHES OR DIPSO)/CN
L136(     17777)SEA FILE=CAPLUS ABB=ON  L135
L137(        21)SEA FILE=REGISTRY ABB=ON  (EPPS OR HEPBS OR HEPES OR HEPPSO OR
                  MES OR MOBS OR MOPS OR MOPSO OR PIPES OR POPSO OR TABS OR TAPS
                  OR TAPSO OR TES OR TRICINE OR TRIS)/CN
L138(      6466)SEA FILE=CAPLUS ABB=ON  L137
L139(     37145)SEA FILE=CAPLUS ABB=ON  PLU=ON  (ACES/OBI OR ADA/OBI OR
                  AMP/OBI OR AMPSO/OBI OR BES/OBI OR BICINE/OBI OR (TRIS/OBI (W)
                  BIS/OBI (W) PROPANE/OBI) OR (TRISBIS/OBI (W) PROPANE/OBI) OR
                  CABS/OBI OR CAPS/OBI OR CAPSO/OBI OR CHES/OBI OR DIPSO/OBI)
L140(    100277)SEA FILE=CAPLUS ABB=ON  PLU=ON  (EPPS/OBI OR HEPBS/OBI OR
                  HEPES/OBI OR HEPPSO/OBI OR MES/OBI OR MOBS/OBI OR MOPS/OBI OR
                  MOPSO/OBI OR PIPES/OBI OR POPSO/OBI OR TABS/OBI OR TAPS/OBI OR
                  TAPSO/OBI OR TES/OBI OR TRICINE/OBI OR TRIS/OBI)
L141(    150227)SEA FILE=CAPLUS ABB=ON  PLU=ON  L136 OR L138 OR L139 OR L140
L142(        93)SEA FILE=CAPLUS ABB=ON  PLU=ON  L141 AND L134
L143(     16350)SEA FILE=CAPLUS ABB=ON  PLU=ON  L128 OR L129
L144          2 SEA FILE=CAPLUS ABB=ON  PLU=ON  L142 AND L143


=> S L127 OR L144
L379          5 L127 OR L144

=> FILE MEDLINE
FILE 'MEDLINE' ENTERED AT 16:14:26 ON 04 JUN 2002

 FILE LAST UPDATED: 2 JUN 2002 (20020602/UP).  FILE COVERS 1958 TO DATE.

 On April 22, 2001, MEDLINE was reloaded.  See HELP RLOAD for details.

 MEDLINE now contains IN-PROCESS records.  See HELP CONTENT for details.

 MEDLINE is now updated 4 times per week.  A new current-awareness alert
 frequency (EVERYUPDATE) is available.  See HELP UPDATE for more information.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2001 vocabulary.  Enter HELP THESAURUS for details.

 The OLDMEDLINE file segment now contains data from 1958 through 1965.
 Enter HELP CONTENT for details.

 Left, right, and simultaneous left and right truncation are available in the
 Basic Index.  See HELP SFIELDS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
 SUBSTANCE IDENTIFICATION.

=> D QUE L229
L216(    504984)SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L217(    431863)SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L218(    285685)SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L219(    649324)SEA FILE=MEDLINE ABB=ON  PLU=ON  (L216 OR L217 OR L218)
```

cross-over search in Registry

search using abbreviations

IP = Isolation & Purification

```
L220(     39164)SEA FILE=MEDLINE ABB=ON  PLU=ON  L219 (L) IP/CT
L221(      9059)SEA FILE=MEDLINE ABB=ON  PLU=ON  L220/MAJ
L222(     86011)SEA FILE=MEDLINE ABB=ON  ACES OR ADA OR AMP OR AMPSO OR BES OR
                 BICINE OR (TRIS (W) BIS (W) PROPANE) OR (TRISBIS (W) PROPANE)
                 OR CABS OR CAPS OR CAPSO OR CHES OR DIPSO
L223(     15600)SEA FILE=MEDLINE ABB=ON  EPPS OR HEPBS OR HEPES OR HEPPSO OR
                 MES OR MOBS OR MOPS OR MOPSO OR PIPES OR POPSO OR TABS OR TAPS
                 OR TAPSO OR TES OR TRICINE OR TRIS
L224(    101236)SEA FILE=MEDLINE ABB=ON  PLU=ON  L222 OR L223
L225(       120)SEA FILE=MEDLINE ABB=ON  PLU=ON  L224 AND L221
L226(      2361)SEA FILE=MEDLINE ABB=ON  PLU=ON  ION EXCHANGE+PFT/CT
L227(     42583)SEA FILE=MEDLINE ABB=ON  PLU=ON  CHROMATOGRAPHY, ION EXCHANGE+N
                 T,PFT/CT
L228(     44911)SEA FILE=MEDLINE ABB=ON  PLU=ON  L226 OR L227
L229          4 SEA FILE=MEDLINE ABB=ON  PLU=ON  L225 AND L228
```

Major focus of document

Used abrev. in ideas in Medline — tried Reg.# but there were very few hits.

```
=> D QUE L243
L230(    504984)SEA FILE=MEDLINE ABB=ON  PLU=ON  NUCLEIC ACIDS+PFT/CT
L231(    431863)SEA FILE=MEDLINE ABB=ON  PLU=ON  DNA+PFT/CT
L232(    285685)SEA FILE=MEDLINE ABB=ON  PLU=ON  RNA+PFT/CT
L233(    649324)SEA FILE=MEDLINE ABB=ON  PLU=ON  (L230 OR L231 OR L232)
L234(     39164)SEA FILE=MEDLINE ABB=ON  PLU=ON  L233 (L) IP/CT
L235(      9059)SEA FILE=MEDLINE ABB=ON  PLU=ON  L234/MAJ
L236(     86011)SEA FILE=MEDLINE ABB=ON  ACES OR ADA OR AMP OR AMPSO OR BES OR
                 BICINE OR (TRIS (W) BIS (W) PROPANE) OR (TRISBIS (W) PROPANE)
                 OR CABS OR CAPS OR CAPSO OR CHES OR DIPSO
L237(     15600)SEA FILE=MEDLINE ABB=ON  EPPS OR HEPBS OR HEPES OR HEPPSO OR
                 MES OR MOBS OR MOPS OR MOPSO OR PIPES OR POPSO OR TABS OR TAPS
                 OR TAPSO OR TES OR TRICINE OR TRIS
L238(    101236)SEA FILE=MEDLINE ABB=ON  PLU=ON  L236 OR L237
L239(       120)SEA FILE=MEDLINE ABB=ON  PLU=ON  L238 AND L235
L240(     14228)SEA FILE=MEDLINE ABB=ON  PLU=ON  ADSORPTION+PFT/CT
L241(     18661)SEA FILE=MEDLINE ABB=ON  PLU=ON  ABSORPTION+PFT/CT
L242(     32730)SEA FILE=MEDLINE ABB=ON  PLU=ON  L240 OR L241
L243          0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L239 AND L242

=> FILE BIOSIS WPIDS
FILE 'BIOSIS' ENTERED AT 16:15:41 ON 04 JUN 2002
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```

multifile search using free text.

```
=> D QUE L317
L306(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                 NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L307(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L308(     51726)SEA ION EXCHANGE
L309(   1456171)SEA SOLID OR STATIONARY OR MATRIX OR MEDIUM OR MEDIA
L310(    164224)SEA L306 (S) L307
L311(      6225)SEA L308 (S) L309
L312(       205)SEA L310 AND L311
L313(    139165)SEA ACES OR ADA OR AMP OR AMPSO OR BES OR
                 BICINE OR (TRIS (W) BIS (W) PROPANE) OR (TRISBIS (W) PROPANE)
                 OR CABS OR CAPS OR CAPSO OR CHES OR DIPSO
L314(    199083)SEA EPPS OR HEPBS OR HEPES OR HEPPSO OR
                 MES OR MOBS OR MOPS OR MOPSO OR PIPES OR POPSO OR TABS OR TAPS
                 OR TAPSO OR TES OR TRICINE OR TRIS
```

```
L315(    336936)SEA L313 OR L314
L316(     11213)SEA L315 (S) BUFFER?
L317          4 SEA L312 AND L316


=> D QUE L329
L318(   1003165)SEA NUCLEIC ACID OR DNA OR RNA OR POLYNUCLEOTIDE OR POLY
                NUCLEOTIDE OR OLIGONUCLEOTIDE OR OLIGO NUCLEOTIDE
L319(   2249023)SEA PURIF? OR ISOLAT? OR SEPARAT?
L320(     51726)SEA ION EXCHANGE
L321(    164224)SEA L318 (S) L319
L322(    376601)SEA ADSORP? OR ABSORP? OR SORB? OR SORP?
L323(    139165)SEA ACES OR ADA OR AMP OR AMPSO OR BES OR
                BICINE OR (TRIS (W) BIS (W) PROPANE) OR (TRISBIS (W) PROPANE)
                OR CABS OR CAPS OR CAPSO OR CHES OR DIPSO
L324(    199083)SEA EPPS OR HEPBS OR HEPES OR HEPPSO OR
                MES OR MOBS OR MOPS OR MOPSO OR PIPES OR POPSO OR TABS OR TAPS
                OR TAPSO OR TES OR TRICINE OR TRIS
L325(    336936)SEA L323 OR L324
L326(     11213)SEA L325 (S) BUFFER?
L327(      3906)SEA L320 (S) L322
L328(        70)SEA L321 AND L327
L329          1 SEA L328 AND L326


=> S L317 OR L329
L380          5 L317 OR L329

=>
=> DUP REM L229 L379 l380
FILE 'MEDLINE' ENTERED AT 16:18:55 ON 04 JUN 2002

FILE 'CAPLUS' ENTERED AT 16:18:55 ON 04 JUN 2002
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FILE 'WPIDS' ENTERED AT 16:18:55 ON 04 JUN 2002
COPYRIGHT (C) 2002 THOMSON DERWENT
PROCESSING COMPLETED FOR L229
PROCESSING COMPLETED FOR L379
PROCESSING COMPLETED FOR L380
L381          14 DUP REM L229 L379 L380 (0 DUPLICATES REMOVED)

=> d ibib ab ct 1-14

L381 ANSWER 1 OF 14  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         2001:472420  CAPLUS
DOCUMENT NUMBER:          135:58162
TITLE:                    The removal of extraneous substances from biological
                          fluids containing nucleic acids and the recovery of
                          nucleic acids
INVENTOR(S):              Krupey, John
PATENT ASSIGNEE(S):       Ligochem, Inc., USA
SOURCE:                   PCT Int. Appl., 36 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
```

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001045522	A1	20010628	WO 2000-US34514	20001220

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-172585P P 19991220

AB The invention concerns a method for removing proteins and unwanted aggregated DNA from biol. media contg. nucleic acids by subjecting the starting material to a water insol. complex consisting of ProCipitateTM and protein interspersed with ferric oxide particles to a magnetic force.

CT Extraction
CT Denaturants
CT Proteins, specific or class
CT **DNA**
CT Polymers, uses
CT Particles
CT **Adsorbents**
CT Blood
CT Centrifugation
CT Chelating agents
CT Escherichia coli
CT Magnetic separation
CT Microtiter plates
CT Plasmids
CT Sample preparation
CT Polyoxyalkylenes, biological studies
CT Alkali metal hydroxides
CT Hydroxides (inorganic)
CT Oxides (inorganic), uses
CT Salts, uses
CT **DNA**
CT **RNA**
CT Nucleic acids
CT Proteins, general, processes
CT Polyoxyalkylenes, biological studies

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L381 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:360213 CAPLUS
DOCUMENT NUMBER: 134:337926
TITLE: Method using fumed metallic oxides for isolating DNA from a proteinaceous medium and kit for performing method
INVENTOR(S): Krupey, John
PATENT ASSIGNEE(S): Ligochem, Inc., USA
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001034844	A1	20010517	WO 2000-US31005	20001113

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-164608P P 19991110

AB A method is described for isolating DNA from a proteinaceous medium such as whole blood, Hb-contg. urine or saliva. Also disclosed are test kits for practicing the method. Guanidine thiocyanate in sodium acetate pH 7.0 soln. contg. EDTA was added to Hb-contg. and white blood cell-contg. urine samples to disrupt the cells, dissoc. the DNA histone complex, and release free DNA into soln. Contaminating proteins were removed by treating the chaotrope-contg. urine with a water-insol. cross-linked polymeric acid, trade name ProCipitate. The DNA was captured with titanium oxide P25, the aggregate was washed, and DNA was recovered by treatment with NaOH.

CT Escherichia coli
CT **Adsorbents**
CT Blood
CT Blood plasma
CT Blood serum
CT Cell nucleus
CT Centrifugation
CT Chelating agents
CT Filtration
CT Gel electrophoresis
CT Genetic vectors
CT PCR (polymerase chain reaction)
CT Plasmids
CT Saliva
CT Sample preparation
CT Test kits
CT Acids, uses
CT Alkali metal hydroxides
CT Hydroxides (inorganic)
CT Oxides (inorganic), uses
CT Salts, uses
CT **Nucleic acids**
CT **DNA**
CT Proteins, general, preparation
CT RNA
CT Leukocyte
CT Animal tissue
CT Bacteria (Eubacteria)
CT Cell
CT Plant tissue
CT Virus
CT Urine
CT Plastics, uses
CT Particles

CT Denaturants
CT Carbohydrates, processes
CT Lipids, processes
CT Proteins, specific or class
CT DNA
CT Polymers, uses
CT Chromosome
CT Genetic engineering
CT Hemoglobins
CT Polyoxyalkylenes, biological studies
CT Microtiter plates
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L381 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:645576 CAPLUS
DOCUMENT NUMBER: 135:207838
TITLE: Apparatus and method for removing small molecules and ions from low volume biological samples
INVENTOR(S): Smolko, Daniel; Sheldon, Ed; Swanson, Paul; Mehta, Prashant P.; Jimenez, Manuel; Bloch, Kenneth A.; Westin, Lorelei; Landis, Geoffrey C.
PATENT ASSIGNEE(S): Nanogen, Inc., USA
SOURCE: U.S., 13 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6284117	B1	20010904	US 1999-469588	19991222

AB This invention provides an app. and method for desalting a low vol. soln. for use in connection with an electronically addressable microarray. The app. comprises a tubular mol. wt. cut-off membrane embedded within a ion exchange resin filled chamber. The app. provides a very high surface to vol. ratio of membrane pore surface to exchange resin capacity for absorbing charged mols. The design facilitates the speedy removal of charged mols. from test solns. with the resultant desalted soln. having a very low ionic strength suitable for use in the electronic transport of nucleic acids, proteins, and cells.
CT Molecules
CT Apparatus
CT DNA microarray technology
CT **Pipes** and Tubes ——→ obviously not the buffer "PIPES"
CT Absorption
CT Anion exchangers
CT Apparatus
CT Biological materials
CT Buffers
CT Cation exchangers
CT Cell
CT Coils
CT Containers
CT Electric conductivity
CT Electrodes
CT Flow
CT Grains (particles)
CT Interface

CT **Ion exchangers**
CT Ionic strength
CT Ions
CT Molecular weight
CT Molecules
CT Nucleic acid amplification (method)
CT PCR (polymerase chain reaction)
CT Pore
CT Powders
CT Solutions
CT Volume
CT Polymers, uses
CT **DNA**
CT **Nucleic acids**
CT Proteins, general, preparation
CT Electric current
CT Electrodialysis
CT Salts, processes
CT Electronics
CT Membranes, nonbiological
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L381 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:643430 CAPLUS
DOCUMENT NUMBER: 135:191272
TITLE: Isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces
INVENTOR(S): Baker, Matthew John Your Inventor
PATENT ASSIGNEE(S): UK
SOURCE: U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U.S. Ser. No. 586,009.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001018513	A1	20010830	US 2000-736632	20001214
WO 9929703	A2	19990617	WO 1998-GB3602	19981204
WO 9929703	A3	19990826		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:
GB 1997-25839 A 19971206
GB 1998-15541 A 19980717
WO 1998-GB3602 W 19981204
US 2000-586009 A2 20000602

AB A method for extg. nucleic acids from a biol. material such as blood comprises contacting the mixt. with a material at a pH such that the material is pos. charged and will bind neg. charged nucleic acids and then eluting the nucleic acids at a pH when the said materials possess a neutral or neg. charge to release the nucleic acids. The nucleic acids

can be removed under mildly alk. conditions to the maintain integrity of the nucleic acids and to allow retrieval of the nucleic acids in reagents that are immediately compatible with either storage or anal. testing. The use of surfaces modified with zwitterionic buffers is demonstrated.

CT Paramagnetic materials
CT Buffers
CT **Ion exchangers**
CT Blood analysis
CT **Sorbents**
CT **DNA**
CT **Nucleic acids**
CT **RNA**
CT Peptides, uses
CT Amines, uses
CT **DNA**
CT Glass, uses
CT Carboxyl group

L381 ANSWER 5 OF 14 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-398168 [42] WPIDS
DOC. NO. CPI: C2001-121136
TITLE: Fragmenting and labeling nucleic acid involves providing mixture containing nucleic acids, labeling agents and multivalent metal cations, chemically fragmenting the nucleic acids and attaching labels to the fragments.
DERWENT CLASS: B04 D16
INVENTOR(S): BANERJEE, A R; BECKER, M M; BROWNE, K A; FRIEDENBERG, M C; HAJJAR, F F; LAAYOUN, A; MENOU, L; TORA, C
PATENT ASSIGNEE(S): (INMR) BIO MERIEUX; (GENP-N) GEN-PROBE INC
COUNTRY COUNT: 90
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001044507	A1	20010621	(200142)*	EN	44

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000017913 A 20010625 (200162)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001044507	A1	WO 1999-IB2073	19991217
AU 2000017913	A	WO 1999-IB2073	19991217
		AU 2000-17913	19991217

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000017913	A	Based on	WO 200144507

PRIORITY APPLN. INFO: WO 1999-IB2073 19991217
AB WO 200144507 A UPAB: 20010726
NOVELTY - Fragmenting and labeling (M) a synthetic or natural nucleic acid

involves providing a mixture containing a nucleic acid (NA), a labeling agent containing a detectable label, and a multivalent metal cation in aqueous solution, chemically fragmenting NA to produce a multiplicity of fragments of NA, and attaching a label to NA fragments to produce a detectably labeled NA fragment.

USE - (M) is useful for preparing labeled nucleic acids, such as fragments to be bound to immobilized probes or detection probes.

ADVANTAGE - (M) limits non-specific signals that results from the labeling step, particularly when combined with **nucleic acid purification** steps using any of a variety of methods. (M) provides **nucleic acid** fragments that are relatively uniformly labeled, and fragmentation results in fragments that are of an optimum size for hybridization to **nucleic acid** probes used in detection of the fragmented **nucleic acids**, thus making the detecting step more rapid and efficient. The **nucleic acid** fragmentation and labeling reaction also serves as a decontamination tool, i.e., the process fragments **RNA** molecules present in the amplification mixture thus removing potential targets for further amplification from the system because the fragmented **RNA** fragments are incapable of being a target for further amplification.

Dwg.0/0

L381 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:741033 CAPLUS
DOCUMENT NUMBER: 133:278360
TITLE: A kit for recovering RNA using adsorption of carbohydate contaminants onto a polymer
INVENTOR(S): Kiefer, Evelyn; Heller, Werner; Ernst, Dietrich; Sandermann, Heinrich
PATENT ASSIGNEE(S): Gsf-Forschungszentrum fur Umwelt und Gesundheit, G.m.b.H., Germany
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1044984	A2	20001018	EP 2000-108179	20000413
EP 1044984	A3	20010613		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19916534	A1	20001019	DE 1999-19916534	19990413

PRIORITY APPLN. INFO.: DE 1999-19916534 A 19990413

AB A kit for the purifn. of RNA from a wide array of biol. samples is described. The kit uses a lysis buffer contg. a polymer that can be used to capture carbohydrates that copurify with the RNA immediately upon liberation and simplify the procedure. The preferred polymer is polyvinylpyrrolidone. Use of the method to isolate RNA from of no. of green and woody plants is demonstrated. The material was heated in the lysis buffer (Tris Hcl pH 8.0 40mM, CTAB 3%, PVP 2%, EDTA 50mM, NaCl 2M, Spermidine, 0.5 g/L, .beta.-mercaptoethanol 2%) at 65.degree. for 5 min. This was cooled, mixed with chloroform/isoamyl alc. and a sorbent (Nucleon PhytoPure Resin) to capture the RNA. The RNA can then be collected by solvent extn. and pptn. with DNA removed with DNase.

CT Apple
CT Aquatic plant

CT Arabidopsis thaliana
CT Barley
CT Bean (Phaseolus vulgaris)
CT Beech (Fagus)
CT Birch (Betula)
CT Cyclamen
CT Euphorbia milii
CT Ficus benjamina
CT Gerbera
CT Hazel (Corylus)
CT Lilac (Syringa)
CT Linden (Tilia)
CT Nettle
CT Oak (Quercus)
CT Oleander (Nerium)
CT Pelargonium
CT Petunia
CT Pine (Pinus)
CT Plant (Embryophyta)
CT Potato (Solanum tuberosum)
CT Ranunculus
CT Rose (Rosa)
CT Sorbus aucuparia
CT Soybean (Glycine max)
CT Sycamore
CT Tobacco
CT Tomato
CT Tradescantia
CT Viola
CT **Sorbents**
CT Borates
CT Chelating agents
CT Detergents
CT **RNA**

L381 ANSWER 7 OF 14 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-163495 [15] WPIDS
DOC. NO. CPI: C2000-051191
TITLE: Src homology 3 protein or fragment for preventing or treating proliferative disease, such as cancer or chronic inflammatory disease, comprises src homology 3 domain binding activity and nuclear localization activity.
DERWENT CLASS: B04
INVENTOR(S): FINAN, P; KELLIE, S
PATENT ASSIGNEE(S): (YAMA) YAMANOUCHI UK LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2341182	A	20000308	(200015)*		52

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2341182	A	GB 1998-19038	19980901

PRIORITY APPLN. INFO: GB 1998-19038 19980901

AB GB 2341182 A UPAB: 20000323
NOVELTY - A src homology 3 (SH3) binding protein or fragment which has a sequence of amino acid residues having SH3 domain binding activity and nuclear localization activity is new.
DETAILED DESCRIPTION - An SH3 binding protein or fragment comprises a sequence of amino acid residues having SH3 domain binding activity (I) selected from 22 amino acid sequences given in the specification, and a sequence of amino acid residues having a nuclear localization activity.
INDEPENDENT CLAIMS are also included for the following:
(1) an SH3 binding protein or fragment comprising a sequence of amino acid residues having SH3 domain binding activity and a sequence of amino acid residues having a nuclear localization activity (II) selected from (single letter amino acid code):
(i) RKEARKRELKKNKK (IIa);
(ii) KDKRKK (IIb);
(iii) PPRRRDED (IIc); or
(iv) PGKSRKKK (IId);
(2) an SH3 binding protein or fragment comprising the carboxy terminal region of the np 70 sequence (a 250 amino acid sequence, given in the specification) or the full length np 70 sequence (a 641 amino acid sequence, given in the specification);
(3) a DNA sequence which encodes the SH3 binding protein above;
(4) an antibody or fragment specific for the SH3 binding protein; and
(5) a method for the production of the SH3 binding protein or fragment comprising:
(a) lysing cells;
(b) carrying out a binding assay with the lysate;
(c) eluting; and
(d) sequencing and cloning the bound protein.
ACTIVITY - Anticancer; anti-proliferative; anti-inflammatory.
No biological data.
MECHANISM OF ACTION - None given.
USE - The SH3 binding protein or fragment is useful for the prevention or treatment of proliferative disease, such as cancer and chronic inflammatory disease.
Dwg.0/11

L381 ANSWER 8 OF 14 MEDLINE
ACCESSION NUMBER: 2000424990 MEDLINE
DOCUMENT NUMBER: 20299633 PubMed ID: 10840595
TITLE: Anion exchange purification of plasmid DNA using expanded bed adsorption.
AUTHOR: Ferreira G N; Cabral J M; Prazeres D M
CORPORATE SOURCE: Centro de Engenharia Biologica e Quimica, Instituto Superior Tecnico, Lisboa, Portugal.
SOURCE: BIOSEPARATION, (2000) 9 (1) 1-6.
Journal code: BGH; 9011423. ISSN: 0923-179X.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200009
ENTRY DATE: Entered STN: 20000922
Last Updated on STN: 20000922
Entered Medline: 20000914

AB Recent developments in gene therapy with non-viral vectors and DNA vaccination have increased the demand for large amounts of pharmaceutical-grade plasmid DNA. The high viscosity of process streams is of major concern in the purification of plasmids, since it can cause high back pressures in column operations, thus limiting the throughput. In

order to avoid these high back pressures, expanded bed anion exchange chromatography was evaluated as an alternative to fixed bed chromatography. A Streamline 25 column filled with 100 ml of Streamline QXL media, was equilibrated with 0.5 M NaCl in TE (10 mM **Tris**, 1 mM EDTA, pH = 8.0) buffer at an upward flow of 300 cmh-1, E. coli lysates (obtained from up to 3 liters of fermentation broth) were injected in the column. After washing out the unbound material, the media was allowed to sediment and the plasmid was eluted with 1 M NaCl in TE buffer at a downward flow of 120 cmh-1. Purification factors of 36 +/- 1 fold, 26 +/- 0.4 plasmid purity, and close to 100% yields were obtained when less than one settled column volume of plasmid feed was injected. However, both recovery yield and purity abruptly decreased when larger amounts were processed-values of 35 +/- 2 and 5 +/- 0.7 were obtained for the recovery yield and purity, respectively, when 250 ml of feedstock were processed. In these cases, gel clogging and expansion collapse were observed. The processing of larger volumes, thus larger plasmid quantities, was only possible by performing an isopropanol precipitation step prior to the chromatographic step. This step led to an enhancement of the purification step.

CT Check Tags: Support, Non-U.S. Gov't
Anions
Carboxylic Ester Hydrolases: GE, genetics
***Chromatography, Ion Exchange: MT, methods**
DNA, Bacterial: IP, isolation & purification
Escherichia coli: GE, genetics
Genes, Fungal
Ion Exchange Resins
Particle Size
***Plasmids: IP, isolation & purification**
*Technology, Pharmaceutical: MT, methods
Viscosity

L381 ANSWER 9 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1992:189164 BIOSIS
DOCUMENT NUMBER: BA93:100114
TITLE: RAPID TWO-STEP PURIFICATION PROCESS FOR THE PREPARATION OF PYROGEN-FREE MURINE IMMUNOGLOBULIN G-1 MONOCLONAL ANTIBODIES.
AUTHOR(S): NEIDHARDT E A; LUTHER M A; RECNY M A
CORPORATE SOURCE: PROCEPT, INC., 840 MEMORIAL DRIVE, CAMBRIDGE, MASS. 02139.
SOURCE: J CHROMATOGR, (1992) 590 (2), 255-262.
CODEN: JOCRAM. ISSN: 0021-9673.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB A cost-efficient process was specifically designed for the preparation of gram amounts of highly pure murine immunoglobulin (Ig) G1 monoclonal antibodies (mAbs). This rapid, simple and scalable **purification** process employs a unique binding and elution protocol for IgG1 mAbs on a silica-based, mixed-mode **ion-exchange** resin followed by conventional anion-exchange chromatography. mAbs are bound to BakerBond ABx **medium** at pH 5.6 directly from serum-supplemented hybridoma culture supernatants. Contaminating proteins and **nucleic acids** are removed by an intermediate wash at pH 6.5, followed by the specific elution of IgG1 mAbs with 100 mM **Tris**-HCl (pH 8.5). The mAb eluate is then loaded directly on to QAE-Sepharose Fast Flow **medium** and eluted with 10 mM sodium phosphate **buffer** (pH 7.4), containing 150 mM sodium chloride. The resulting IgG1 mAbs are greater than 98% pure, free from measurable endotoxin, formulated in a physiological **buffer** and suitable for in vivo applications.

L381 ANSWER 10 OF 14 MEDLINE
ACCESSION NUMBER: 91373538 MEDLINE
DOCUMENT NUMBER: 91373538 PubMed ID: 1894726
TITLE: Enrichment of biologically active U1 small nuclear RNAs by ion-exchange high-performance liquid chromatography.
AUTHOR: Leff V; Gao J P; Vega L R; Herrera R J
CORPORATE SOURCE: Department of Biological Sciences, Florida International University, Miami 33199.
CONTRACT NUMBER: RR08205 (NCRR)
SOURCE: JOURNAL OF CHROMATOGRAPHY, (1991 Jun 28) 547 (1-2) 462-7.
Journal code: HQF; 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199110
ENTRY DATE: Entered STN: 19911108
Last Updated on STN: 19911108
Entered Medline: 19911024

AB The use of ion-exchange high-performance liquid chromatography in conjunction with preparative electrophoresis to facilitate the purification of biologically active snRNAs is described. Separation of total nuclear RNA from a Bombyx mori cell line was done with a Bio-Rad MA7 plasmid column in a HRLC 500 system. Individual fractions were subjected to electrophoresis through 14% polyacrylamide gels for identification. High levels of U1 RNA were confirmed by Northern analysis with a human U1 probe. Biological activity of RNAs from the column was demonstrated by their ability to incorporate 32P-**AMP** at the 3' end. Ion-exchange chromatography provides a rapid, automated method for purifying large amounts of RNAs that can then be utilized in further studies.

CT Check Tags: Animal; Female; Support, U.S. Gov't, P.H.S.
Adenosine Monophosphate: ME, metabolism
Blotting, Northern
Cell Line
*Chromatography, High Pressure Liquid: MT, methods
***Chromatography, Ion Exchange: MT, methods**
Electrophoresis, Polyacrylamide Gel
Ovary: CH, chemistry
Ovary: CY, cytology
Ovary: ME, metabolism
Phosphorus: ME, metabolism
Plasmids
RNA Probes
***RNA, Small Nuclear: IP, isolation & purification**
RNA, Small Nuclear: ME, metabolism
Silkworms

L381 ANSWER 11 OF 14 MEDLINE
ACCESSION NUMBER: 89079809 MEDLINE
DOCUMENT NUMBER: 89079809 PubMed ID: 3204142
TITLE: Purification of transfer RNA species by single-step ion-exchange high-performance liquid chromatography.
AUTHOR: Guenther R H; Gopal D H; Agris P F
CORPORATE SOURCE: Division of Biological Sciences, University of Missouri, Columbia 65211.
CONTRACT NUMBER: GM23037 (NIGMS)
SOURCE: JOURNAL OF CHROMATOGRAPHY, (1988 Jul 1) 444 79-87.
Journal code: HQF; 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198902
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19970203
Entered Medline: 19890207

AB Anion-exchange high-performance liquid chromatography (HPLC) methods have been developed for the purification and concentration of milligram quantities of tRNA. A Waters Protein Pak DEAE 5PW 150 x 21.5 mm I.D. column was utilized for the separation of tRNA species. The chromatographic conditions chosen created non-denaturing conditions for separating the different species: 0.1 M **Tris** buffer (pH 7.6) at 25 degrees C, with a 0.25 M to 0.4 M sodium chloride gradient, using a 170-min gradient. The gradient form could be adjusted for optimizing purification (to over 85%) of the tRNA species of interest. The same DEAE packing in a smaller column was found to be effective for concentrating solutions of the purified tRNA. Fifty-fold concentration and recoveries above 90% have been obtained by this method. These methods were successfully applied to the purification of individual tRNA species from both Escherichia coli and yeast.

CT Check Tags: Support, U.S. Gov't, P.H.S.
Amino Acids: AN, analysis
Chromatography, DEAE-Cellulose
Chromatography, High Pressure Liquid
Chromatography, Ion Exchange
Electrophoresis, Polyacrylamide Gel
Nucleosides: AN, analysis
***RNA, Transfer: IP, isolation & purification**
Sodium Dodecyl Sulfate

L381 ANSWER 12 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1986:375886 BIOSIS
DOCUMENT NUMBER: BA82:70862
TITLE: **ISOLATION** AND **PURIFICATION** OF 5S RIBOSOMAL **RNA** FROM THE RHESUS MONKEY MACACA-MULATTA LIVER.
AUTHOR(S): ZHENG Z; ZHONG J; LI J
CORPORATE SOURCE: KUNMING INST. ZOOL., ACADEMIA SINICA.
SOURCE: ACTA THERIOL SIN, (1986) 6 (1), 1-6.
CODEN: SHXUDJ.
FILE SEGMENT: BA; OLD
LANGUAGE: Chinese

AB 5SrRNA is a small molecular ribonucleic acid existing in the large subunit of ribosomes of prokaryotic and eukaryotic cells. It is one of the most suitable molecule for studying molecular evolution and plays an important role in protein biosynthesis. A simple and reliable procedure of the **purification** of 5S ribosomal **RNA** from the Rhesus monkey liver is described. The liver was removed from a freshly killed Rhesus monkey and homogenized with two volumes of the "TSMK" **buffer** containing 0.005 mol/L **tris**-HCl pH7.5, 0.25mol/L Sucrose, 0.005mol/L MgCl2, 0.025mol/L KCl and 0.2% bentonite. The homogenate was centrifuged at 10000 .times. g for 20 min. The supernatant (cytoplasmic fraction) was treated with water-saturated phenol containing 0.1% 8-hydroxyquinoline and 0.2% sodium dodecyl sulfate-bentonite, centrifuged at 1000 .times. g 40 min and then total RNA5 was precipitated by cold 95% ethanol. Low-molecular weight RNA5 was extracted from the precipitate with 1 mol/L sodium chloride solution. Then, the low molecular weight **RNA**, was **purified** by **ion-exchange** chromatography of DEAE-Sephadex A-50 and eluted with a linear concentration from 0.375mol/L to 0.525 mol.L NaCl. The 5SrRNA was

purified from low molecular weight **RNA**, by 10% preparative polyacrylamide gel slab electrophoresis in the presence of 7mol/L urea, using 90mmol/L **tris**-boric acid pH 8.3, and 2.5mmol/L ethylenediamine tetraacetic acid disodium **buffer** system. The 5SrRNA band was excised from the preparative slab gel under 254nm ultraviolet light, eluted with 10mmol/L **tris** **buffer** (pH 8.0), containing 350mmol/L KCl, 10mmol/L MgCl2, 1mmol/L EDTA and dried in vacuo. Identification of polyacrylamide gel electrophoresis and ultraviolet **absorption** spectrum for pure 5SrRNA of the liver of Rhesus monkey indicated that only a single band on denatured polyacrylamide gel and a typical ultraviolet **absorption** peak of **nucleic acid** were shown. The A260/A230 ratio was 2.08 and A260/A280 ratio esd 2.07.

L381 ANSWER 13 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1980:196204 BIOSIS
DOCUMENT NUMBER: BA69:71200
TITLE: MACRO MOLECULAR COMPLEXES OF AMINOACYL TRANSFER **RNA** SYNTHETASES EC-6.1.1.- FROM EUKARYOTES 2. AGAROSE GEL FILTRATION BEHAVIOR OF THE EXTENSIVELY **PURIFIED** HIGH MOLECULAR WEIGHT COMPLEXES OF 7 AMINOACYL TRANSFER **RNA** SYNTHETASES FROM SHEEP LIVER.
AUTHOR(S): BREVET A; KELLERMANN O; TONETTI H; WALLER J-P
CORPORATE SOURCE: LAB. BIOCHIM., EC. POLYTECH., F-91128 PALAISEAU CEDEX, FR.
SOURCE: EUR J BIOCHEM, (1979) 99 (3), 551-558.
CODEN: EJBCAI. ISSN: 0014-2956.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB The gel-filtration behavior of a high-MW complex containing 7 aminoacyl-tRNA synthetases purified from sheep liver was examined on columns of 6% agarose (Bio-Gel A-5m). Evidence is provided for selective interaction of the complex with the agarose **matrix**. The binding capacity of agarose for the complex is dictated by the ionic strength of the equilibrating **buffer**: it is low but significant in 25 mM potassium phosphate **buffer** at pH 7.5 (ionic strength 0.068 M) and is considerably enhanced in 50 mM **Tris**-HCl **buffer** at the same pH. Raising the salt concentration leads to nearly complete recovery of enzyme activities. In a column equilibrated in 25 mM phosphate **buffer**, application of the complex at a protein concentration in large excess over the binding capacity of the gel leads to co-elution of each of the 7 aminoacyl-tRNA synthetases as a unique, symmetrical peak of apparent MW close to 106, with 80% recovery of activities. Conversely, application of the complex at low protein concentration, in amounts equivalent to the binding capacity of the gel, leads to complete retention of the enzymes which may be recovered by raising the phosphate concentration to 0.2 M. The application of the complex at low protein concentration on a column equilibrated with 0.2 M potassium phosphate **buffer** to prevent interaction with the **matrix**, leads to co-elution of each of the aminoacyl-tRNA synthetases as a unique peak of apparent MW close to 106. This result attests to the remarkable stability of the complex, which fails to dissociate at high salt concentration, even in the diluted state. This reflects **ion exchange** -mediated interactions between the residual charged group on the agarose gel and the components of the high-MW complex. The preferential retention of the complex on agarose in ionic conditions (i.e., 25 mM phosphate or 50 mM **Tris**-HCl **buffers** at pH 7.5), which ensure normal gel filtration behavior of several marker proteins, may be ascribed to tighter binding of the complex due to multiple-site interactions on account of its larger size.

L381 ANSWER 14 OF 14 MEDLINE
ACCESSION NUMBER: 80020135 MEDLINE
DOCUMENT NUMBER: 80020135 PubMed ID: 486085
TITLE: Structural defects in rat liver deoxyribonucleic acid. Endogenous single-strained regions in comparison with damage induced in vivo by a carcinogen.
AUTHOR: Stewart B W; Huang P H; Brian M J
SOURCE: BIOCHEMICAL JOURNAL, (1979 May 1) 179 (2) 341-52. Journal code: 9YO; 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197911
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19970203
Entered Medline: 19791121

AB Rat liver DNA may be separated into two fractions by stepwise elution from benzoylated-DEAE-cellulose with NaCl and caffeine solutions respectively. Other studies using bacterical and yeast DNA suggested that the first fraction contains native DNA, whereas the second may exhibit some degree of single-stranded character. In the present experiments, chromatography of DNA was monitored by labelling in vivo with [methyl-3H]thymidine in rats previously subjected to partial hepatectomy. In animals killed up to 1 h after thymidine injection, radioactivity eluted in the second fraction was inversely related to the incorporation time, being greatest when animals were killed 10 min after radioisotope injection. However, for most experiments, animals were allowed to survive 2-4 weeks after surgery before use, analysis being made on non-dividing DNA. Under these conditions, the proportion of caffeine-eluted DNA was decreased by subjecting the preparation to shear, before chromatography. A procedure that resulted in 12% of the recovered radioactivity being eluted with caffeine was adopted for experiments involving comparisons of the two DNA fractions. Under these conditions, cross-contamination could be detected by rechromatography, but this did not preclude distinction being made between the two fractions in terms of DNA structure. NaCl-eluted DNA did not bind to nitrocellulose filters. Caffeine-eluted DNA was retained by the filters and released by washing with 3mM-**Tris**/HCl,pH9.4. The fractions did not differ in terms of isopycnic centrifugation in CsCl. The NaCl-eluted fraction migrated as a single band in polyacrylamide gels, and this pattern was not modified by prior digestion with Neurospora crassa endonuclease. In contrast, caffeine-eluted DNA contained a minor component having a wide molecular-weight distribution and was subject to limited digestion by the endonuclease. The kinetics of denaturation of NaCi-eluted DNA in the presence of formaldehyde, in common with unfractionated DNA, were consistent with double-stranded structure. The same analysis of caffeine-eluted DNA revealed structural abnormality equivalent to two defects per 10000 base-pairs. The data are consistent with the minor fraction of rat liver DNA, separated by using benzoylated-DEAE-cellulose, containing regions of local denaturation. We previously showed that administration of the hepatocarcinogen dimethylnitrosamine is associated with an increase in the proportion of caffeine-eluted DNA. In terms of most analysis, differences between DNA fraction from nitrosamine-treated rats were similar to differences exhibited by preparations from control animals. However, structural analysis using denaturation kinetics indicated defects in both the NaCl- and caffeine-eluted DNA isolated from nitrosamine-treated rats. The two fractions differed from each other in that caffeine-eluted DNA exhibited a degree of structural damage far greater than that detected in any preparation from control animals...
CT Check Tags: Animal; Female

Caffeine
Chemistry
Chromatography, DEAE-Cellulose
***DNA: IP, isolation & purification**
DNA, Single-Stranded: IP, isolation & purification
*Dimethylnitrosamine: PD, pharmacology
Kinetics
*Liver: AN, analysis
Liver: DE, drug effects
Nucleic Acid Denaturation: DE, drug effects
Rats

ACCESSION NUMBER: 1999:390406 CAPLUS
DOCUMENT NUMBER: 131:16114
TITLE: Isolation of nucleic acids
INVENTOR(S): Baker, Matthew John
PATENT ASSIGNEE(S): DNA Research Instruments Limited, UK
SOURCE: PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9929703	A2	19990617	WO 1998-GB3602	19981204
WO 9929703	A3	19990826		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2318306	AA	19990617	CA 1998-2318306	19981204
AU 9913447	A1	19990628	AU 1999-13447	19981204
EP 1036082	A2	20000920	EP 1998-957019	19981204
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9815569	A	20011009	BR 1998-15569	19981204
NO 2000002540	A	20000707	NO 2000-2540	20000516
US 2001018513	A1	20010830	US 2000-736632	20001214

PRIORITY APPLN. INFO.:
GB 1997-25839 A 19971206
GB 1998-15541 A 19980717
WO 1998-GB3602 W 19981204
US 2000-586009 A2 20000602

AB A method of extg. nucleic acids from blood comprises contacting blood cells, preferably after lysing with an activated solid phase at one pH to immobilize the nucleic acids and then removing the nucleic acids at a higher pH when the charge has been reversed or neutralized. The solid phase can be glass beads activated by a histidine as a binding agent. The beads can be fluidized by sucking the blood with air up through a column contg. the beads to improve contact and prevent clogging.

IT Plates
(Deep well; isolation of nucleic acids)
IT Denaturants
(chaotropic; isolation of nucleic acids)
IT Glass, uses
RL: NUU (Other use, unclassified); USES (Uses)
(controlled pore; isolation of nucleic acids)
IT Solutions
(hypotonic solns.; isolation of nucleic acids)
IT Detergents
(ionic; isolation of nucleic acids)
IT Affinity
Binders
Biochemical molecules

Blood
Blood analysis
Blood cell
Buffers
Carboxyl group
Ceramics
Containers
Cytolysis
Extraction
Functional groups
Genetic methods
Heat
Immobilization, biochemical
Ion exchangers
Mixers (processing apparatus)
Oxidizing agents
PCR (polymerase chain reaction)
Paramagnetic materials
Pipes and Tubes
pH
(isolation of nucleic acids)

IT DNA
Nucleic acids
RNA
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(isolation of nucleic acids)

IT Salts, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(isolation of nucleic acids)

IT Glass beads
RL: NUU (Other use, unclassified); USES (Uses)
(isolation of nucleic acids)

IT Intercalation compounds
RL: NUU (Other use, unclassified); USES (Uses)
(isolation of nucleic acids)

IT Ligands
RL: NUU (Other use, unclassified); USES (Uses)
(isolation of nucleic acids)

IT Nucleotides, uses
RL: NUU (Other use, unclassified); USES (Uses)
(isolation of nucleic acids)

IT Plastics, uses
RL: NUU (Other use, unclassified); USES (Uses)
(isolation of nucleic acids)

IT Polymers, uses
RL: NUU (Other use, unclassified); USES (Uses)
(isolation of nucleic acids)

IT Polysaccharides, uses
RL: NUU (Other use, unclassified); USES (Uses)
(isolation of nucleic acids)

IT Detergents
(nonionic; isolation of nucleic acids)

IT Amines, uses
RL: NUU (Other use, unclassified); USES (Uses)
(polyamines, nonpolymeric; isolation of nucleic acids)

IT Mixers (processing apparatus)
(stirrers; isolation of nucleic acids)

IT 9001-92-7, Protease

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(isolation of nucleic acids)

IT 50-76-0, Actinomycin d 71-00-1, Histidine, uses 288-32-4D, Imidazole, compds. contg. 1239-45-8, Ethidium bromide 7732-18-5, Water, uses 9003-07-0, Polypropylene 9003-53-6, Polystyrene 26062-48-6, Polyhistidine 26854-81-9, Polyhistidine
RL: NUU (Other use, unclassified); USES (Uses)
(isolation of nucleic acids)

ACCESSION NUMBER: 2001:643430 CAPLUS
DOCUMENT NUMBER: 135:191272
TITLE: Isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces
INVENTOR(S): Baker, Matthew John
PATENT ASSIGNEE(S): UK
SOURCE: U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U.S. Ser. No. 586,009.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001018513	A1	20010830	US 2000-736632	20001214
WO 9929703	A2	19990617	WO 1998-GB3602	19981204
WO 9929703	A3	19990826		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:		
GB 1997-25839	A	19971206
GB 1998-15541	A	19980717
WO 1998-GB3602	W	19981204
US 2000-586009	A2	20000602

AB A method for extg. nucleic acids from a biol. material such as blood comprises contacting the mixt. with a material at a pH such that the material is pos. charged and will bind neg. charged nucleic acids and then eluting the nucleic acids at a pH when the said materials possess a neutral or neg. charge to release the nucleic acids. The nucleic acids can be removed under mildly alk. conditions to the maintain integrity of the nucleic acids and to allow retrieval of the nucleic acids in reagents that are immediately compatible with either storage or anal. testing. The use of surfaces modified with zwitterionic buffers is demonstrated.

IT Paramagnetic materials
(beads, surface modified; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Buffers
(for control of surface charge of sorbents and nucleic acids; isolation

of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Ion exchangers
(for purifn. of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Blood analysis
Sorbents
(isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT DNA
Nucleic acids
RNA
RL: PUR (Purification or recovery); PREP (Preparation)
(isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Peptides, uses
RL: DEV (Device component use); USES (Uses)
(oligopeptides, derivs.; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Amines, uses
RL: DEV (Device component use); USES (Uses)
(polyhydroxylated; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT DNA
RL: PUR (Purification or recovery); PREP (Preparation)
(single-stranded; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Glass, uses
RL: DEV (Device component use); USES (Uses)
(surface-modified, for capture and release of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT Carboxyl group
(surfaces modified with, for capture and release of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT 33529-02-1, 1-Decylimidazole
RL: MOA (Modifier or additive use); USES (Uses)
(as detergent in nucleic acid purifn.; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT 65-46-3D, Cytidine, immobilized 71-00-1D, L-Histidine, derivs., immobilized, uses 102-71-6D, Triethanolamine, derivs., immobilized 103-47-9D, CHES, immobilized 124-68-5D, immobilized 150-25-4D, BICINE, immobilized 288-32-4D, Imidazole, derivs., immobilized 556-33-2D, Glycylglycylglycine, derivs., immobilized 556-50-3D, Glycylglycine, derivs., immobilized 1132-61-2D, MOPS, immobilized 1135-40-6D, CAPS, immobilized 1185-53-1D, Tris hydrochloride, immobilized 3416-24-8D, Glucosamine, derivs., immobilized 4432-31-9D, MES, immobilized 5625-37-6D, 1,4-Piperazinediethanesulfonic acid, immobilized 5704-04-1D, Tricine, immobilized 6620-95-7D, L-Serine, N-L-Seryl, derivs., immobilized 6976-37-0D, BIS-TRIS, immobilized 7361-43-5D, L-Serine, N-glycyl, derivs., immobilized 7365-44-8D, TES, immobilized 7365-45-9D, HEPES, immobilized 7365-82-4D, ACES, immobilized 8063-07-8D, Kanamycin, derivs., immobilized 9003-01-4D, Polyacrylic acid, conjugates with zwitterionic buffers 10191-18-1D, BES, immobilized 16052-06-5D, EPPS, immobilized 26062-48-6D, Poly-L-histidine, immobilized 26239-55-4D, ADA, immobilized 26854-81-9D, immobilized 29915-38-6D, TAPS, immobilized 54960-65-5D, immobilized 59247-16-4D, L-Alanine, N-alanyl, derivs., immobilized 64431-96-5D, Bis-Tris Propane, immobilized

68189-43-5D, POPSO, immobilized 68399-77-9D, MOPSO, immobilized
68399-78-0D, HEPPSO, immobilized 68399-79-1D, AMPSO, immobilized
68399-80-4D, DIPSO, immobilized 68399-81-5D, TAPSO, immobilized
73463-39-5D, CAPSO, immobilized 115724-21-5D, 4-Morpholinebutanesulfonic acid, immobilized 161308-34-5D, immobilized 161308-36-7D, immobilized
RL: DEV (Device component use); USES (Uses)
(for pH regulated capture and release of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT 1332-37-2, Iron oxide, uses 13463-67-7, Titanium dioxide, uses
RL: DEV (Device component use); USES (Uses)
(magnetic, in polystyrene beads; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)

IT 9003-53-6, polystyrene 9012-76-4, chitosan
RL: DEV (Device component use); USES (Uses)
(surface-modified, for capture and release of nucleic acids; isolation of nucleic acids from blood by selective adsorption and desorption using charged surfaces)